XIX. *Journal of a Voyage to* The Eaſt Indies, *in the Ship* Grenville, *Captain* Burnet Abercrombie, *in the Year* 1775. *By* Alexander Dalrymple, *Eſq.* *F. R. S.*

Communicated by the Honourable Henry Cavendiſh, *F. R. S.*

Read January 29, 1778.

EXPLANATION OF THE COLUMNS.

1ſt, THE *date*[(a)].

2d, The *height* of the *thermometer*, according to FAHRENHEIT's ſcale. This thermometer belonged to Mr. RUSSELL, and hung in the open air in the balcony.

3d, including four columns, contains the *regiſter* of the *marine barometers*, all of which, as well as the thermometers, were made by NAIRNE and BLUNT: thoſe marked R and D are quickſilver, of the kind uſually made by them. That marked S is compounded of quickſilver, and of a lighter fluid, for the purpoſe of making the alterations more viſible, which is a very great convenience at ſea; a quickſilver thermometer being fixed to it for the ſake of correcting its height, the heat by which is ſet down in the column marked Th. next to that marked S.

4th, The *weather* and *winds* in four lines; 1ſt line from noon to 6 P.M.; 2d, from 6 P.M. to midnight; 3d, from midnight to 6 A.M.; 4th, from 6 A.M. to noon.

In the column of *weather*, f. denotes *fair*; ſq. *ſqually*; c. *cloudy*; h. *hazy*; r. *rain*; hr. *hard rain*; ſr. *ſmall rain*; dr. r. *drizling rain*; ſh. *ſhowers*; th. *thunder*; l. *lightning*.

It is proper to remark, that the *winds* are ſet down according to the *compaſs*, without any allowance for the *Variation*.

5th in 2, The *difference* between the daily alteration of *latitude* by *account* and *obſervation*; N. denoting that the *obſervation* was to the *Northward* of the *account*; S. that it was to the *Southward*[(b)].

6th in 2, The *difference* between the daily alteration of *longitude* by the *account* and *time-keeper*; W. denoting that the *longitude* by the *time-keeper* was to the *Weſtward* of *account*; E. that it was to the *Eaſtward*.

The reſult of thoſe differences indicates the daily effect of current; however an error in the courſe ſailed, or diſtance run by log, would make the current appear different from what it really was.

7th, The *longitude* from Greenwich, in ſeven columns.

1ſt, The longitude by *account*.

2d, The longitude by the *time-keeper*, which was made by ARNOLD, but without his late improvements.

3d, The *difference* between the *longitudes* deduced from *obſervations* of the *Moon* and from the *time-keeper uncorrected*; E. denoting the time-keeper to be to the Eaſt of ☾; W. denoting time-keeper to Weſt of ☾. This, admitting the *time-keeper* not to be liable to any ſudden changes in its rate of going, indicates the preciſion with which the obſervations of the Moon may be relied on, all circumſtances of weather and of the ſhip's motion conſidered.

4th, The *longitude* by *obſervations* of the *Moon's diſtance* from the *Sun* or *Stars*, adjuſted, by the log, to the noon neareſt the time of obſervation.

5th, The number of *ſights* or *diſtances obſerved*.

6th, The *object* whoſe *diſtance* from the *Moon* was *obſerved*; ☉ denoting the Sun; ✶ the Star; S. Spica Virginis; R. Regulus; A. Aldebaran; At. Atair; P. Pollux; F. Fomalhaut; An. Antares.

7th, The *extreme difference* between the *higheſt* and *loweſt obſervation*; expreſſed in minutes of a degree; when the *ſeconds* amount to *more* than 30, the next minute *above* is taken, *otherwiſe* the next minute *below*.

8th, The *latitude* in two columns:

1ſt, The latitude by *account*, carried on from the *land*, in the ſame manner as the *longitude* by *account*.

(a) Here, for want of room, the day of the month only is expreſſed; but in the original journal the days of the week, and of the Moon, are alſo inſerted.

(b) Next to theſe columns in the original journal are the following, which are left out here only for want of room:
Correct courſe, lee-way variation &c. allowed, and the different courſes reduced to one ſtraight courſe.
Diſtance on that ſtraight courſe.
Difference of latitude by account,
Difference of latitude by obſervation,
The departure,
The difference of longitude by account,
The difference of longitude by the time-keeper,
} in minutes of a degree.

2d, The latitude by *obſervation*; and where the *latitude* could not be had by *obſervation*, it is deduced by *account* from the *laſt obſervation*, in which caſe it is included within [ ].

9th, The *correct longitude* from Greenwich deduced from the *time-keeper corrected* by the *ſight* of *lands*, whereof the *longitudes* are known, and by *obſervations* of the *Moon*, taking a *mean* of the ſeveral obſervations of the *Moon* made within a ſhort period of each other. The *error* of the *time-keeper*, between the *longitude corrected* by *ſight of land* or *obſervations of* the *Moon*, is ſuppoſed to have ariſen by the *time-keeper* having altered its rate of going *uniformly* between theſe obſervations; and the *intermediate longitudes* are determined by the *time-keeper* on this ſuppoſition. Where no obſervations of the *time* were made, it is deduced by the account from the *laſt* obſervation of the *time*, and is then included within [ ].

10th, The *magnetical obſervations* of the *variation* and *dip*, in ſeven columns.

1ſt, 2d, The variation by azimuth, amplitude, * *before*, denoting the obſervation to have been in the *morning*; * *after*, denoting the obſervation to have been in the *evening*. The *variation* was obſerved by the officers with the *compaſſes* belonging to the ſhip.

3d, The *dip* with the *face* of the *inſtrument* to the Eaſt.

4th, Ditto, ditto, ditto, Weſt.

5th, The *mean dip* of the foregoing obſervations.

6th, The *mean corrected*, or what is *ſuppoſed* to be the *true dip*.

7th, The *circumſtances* under which the *obſervations* of the *dip* were made.

12th, The *miles* run by *log*.

The *dip* was obſerved with a *dipping-needle* belonging to the hon. Mr. CAVENDISH, made by SISSON.

The following *remarks* on the *dipping-needle* and *obſervations* are by Mr. CAVENDISH.

The ends of the axis of the dipping-needle are made conical, and turn in conical holes of bell-metal, in the manner of Mr. LORIMER's needle, deſcribed in Phil. Tranſ. vol. LXV. p. 79. The dip was conſtantly obſerved both with the face of the inſtrument to the Eaſt and to the Weſt, and the poles were changed twice during the voyage, in order to ſee whether the needle continued well balanced. The uſe of this method of obſerving is explained in Phil. Tranſ. vol. LXVI. p. 396.

The mean dip corrected is what is ſuppoſed to be the *true dip*. The foundation of this correction is as follows.

By the obſervations on July 12th, when the poles were changed, it appears, that the marked end of the needle was too heavy, ſo as to make that end point $\frac{15}{16}$ths of a degree too low at that place; and therefore, if we ſuppoſe that the force of magnetiſm is equally ſtrong in all parts of the earth, the error produced thereby in other places ſhould be to $\frac{15}{16}$ths of a degree as the coſine of the dip to the radius. The obſervations alſo made when the poles were changed at Suez, agree well enough with this ſuppoſition: therefore, as in all the obſervations the marked end of the needle pointed to the North, the mean dip in all that part of the voyage ſubſequent to July 12th is corrected by ſubtracting

$\frac{4}{8}$	of a degree from the mean dip, when the mean dip is between	63°	and 52°	North, and adding as much when the dip is as much South.
$\frac{5}{8}$		52	43	
$\frac{6}{8}$		43	30	
$\frac{7}{8}$		30	0	

But as before the needle left London, changing the poles was found to make very little difference in the dip, the correction in the preceding part of the voyage is made not ſo great, *videlicet*;

$\frac{1}{8}$	of a degree is ſubtracted from the mean dip, when that dip is between	70°	and 62°
$\frac{2}{8}$		62	52
$\frac{3}{8}$		52	43
$\frac{4}{8}$		43	35
$\frac{5}{8}$		35	30
$\frac{6}{8}$		30	25
$\frac{7}{8}$		25	0

The dip was obſerved on board the Grenville at Deptford, after her return, in the ſame part of the ſhip in which the obſervations were uſually made, and was found not to differ more than 5′ from that obſerved with the ſame needle in a pretty large garden in London, about five miles diſtant; ſo that the obſervations on board the Grenville ſeem to be not much influenced by the iron-work of the ſhip.

	Th.	Marine Barometer				Weather and Winds.	D.L A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E D.	Latitude		Cor. Long.	Magnetical							ML.	N. B. Log-line 51 feet to 29″½.
																					Variation.		Dip						
1775		R.	S.	Th.	D.		N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Az.	Amp.	Face		MD.	C.D.			
																							E.	W.					
	°	In.Dec.	In.Dec	°	In.Dec.		′	′	′	′	° ′ W	° ′ W	′ W	° ′ W			′	° ′ N	° ′ N	° ′ W	° ′ W	′ ° W	°	°	°	°			
Apr. 28						f. h. f. SE. ESE. S by E. E by S. ESE. SE.													49.43				72.4	73.6	73.1	73.1			Between Ram-head and the Lizard.
29						f.h. SE.V.WbS.WSW.SWbW.SW.WSW.V.C.V.WSW.													49.50	5.35			72.4	73.7	73.1	73.1			Lizard Point E½N=ENE½N. 7 or 8 leagues off ſhore.
30			30.2½	55		h. r. SW by S. WSW. W. h. WNW. NW by W. h. r. WNW. C. NNW. r. f. NNW. NW by N. NW.		6		7	6.19	6.12						49.25	49.19	6.12			73.	74.	73.4	73.4	Great ſwell.	37	At 1 P.M the Lizard Point bore by compaſs E½N. Variation allowed ENE½N 7 leagues. The Land's End N by E=NbyW. Take a departure from the Lizard in 49° 57′ 30″ N lat. Long. 5° 15′ W. Firſt and middle part, lights airs and calm. Latter, pleaſant breezes. Great ſwell from W.
May 1	59		30.4½	61		f. NW by N. NW by W. WNW. f. NW by W. NW. f. WNW. W by N. f. W. WSW. W by S.		11		14	6.40	6.19						48.42	48.25	6.19			72.	73.4	72.6	72.6		51	Light breezes; great ſwell from Weſtward.
2	57			56		h. fr. WSW. SW by W. hr. r. SW by S. SW. W by S. r. h. fr. W. WNW. h. r. f. h. NW by W. WNW. NW by W.		9	33		7.22	7.34						48.51	48.43	7.34			72.4	73.	72.6	72.6	Great ſwell.	47	Major part light breezes; great ſwell from Weſtward.
3	54¾		30.0⅓	54		c. NW by N. C. c. C. c. C. E. c. h. E. E by N.					7.29							48.34	[48.26]	[7.41]			72.	72.4	72.2	72.2		18	Moſtly calm. A very large ſwell from Weſtward.
4	56½		30.0¾	56¼		h. ENE. h. ENE. h. c. ENE. V. c. NE. V. C.		31	9		7.57	8.18						47.51	47.20	8.18			71.4	72.6	72.1	72.1	Very ſteady.	48	Light breezes and a great ſwell.
5	57½		30.0	57½		h. C. W by S. c. h. W. WSW. SW. h. r. SW. WSW. h. fr. c. W by S. WSW. NE by N.		13		7	7.13	7.27						46.56	46.12	7.27			71.	72.4	71.6	71.6	Great motion.	68	Firſt part, calm. Middle, an increaſing breeze from Weſtward, with rain. Latter, a fine breeze from the Northward.
6	55¾		30.2	55½		h. N. NNE. h. NNE. NE. ENE. h. c. ENE. ESE. E by N. c. f. E by N. E by S.		19		12	8.36	8.38						45.58	44.55	8.38		18.42*	71.	72.	71.4	71.4	Good deal of motion.	83	Moſtly light breezes, with a ſwell from NW.
7	57		30.2¼	56½		f. ESE. f. E. f. E. f. E. E by N. ENE.		21	4		10.13	10.19						44.14	42.50	10.19			69.6	71.	70.3	70.3	Very ſteady.	126	An increaſing gale from the Eaſtward.
8	61¼		30.2¾	60¾		h. NE by E. NNE. h. NNE. h. NNE. h. NNE. NE.		39	13		10.22	10.43	3 14	10.40 10.29	4 4	⊙	27 46	41.52	40. 9	10.43			68.4	69.2	68 7	68.6	Ditto.	142	Firſt part, freſh gales. Latter, moderate.
																												620	

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D. ☾ T.K.	☾				A.	O.		Variation		Dip						
																						Az.	Amp.	Face		MD.	C.D.			
																								E.	W.					
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		620	
												W	W	E	W				N	N	W	W	W							
May 9	67		30.1¼	67		f. f. h. h. h.	NNE. NNE. NNE. E by S. E by S. V.		11		13	10.34	10.42	13	10.55	3	⊙	36	40.17	38.24	10.42	18.0*	17.43*	67.6	69.	68.3	68.2	Very ſteady.	96	Decreaſing breezes. Changed log-line 48 feet to 29″½.
10	68		30.0½	67¾		h. h. h. h.	ENE. NE. V. V. N by E. N. V. V. SE by E. ESE. SE.		4	19		11.7	11.34						39.26	37.33	11.34	20 38*	18.36*	67.2	68.4	67.7	67.6	Good deal of motion.	55	Moſt part light airs. Several ſmall land birds; two of them, ſuppoſed nightingales came on board, very tired; alſo ſaw a hawk.
11						f. f. f. h. h.	SE by S. C. C. ENE. E. E. NE by E. C. V. C.		10	9		11.28	12.4						39. 3	37.0	12. 4	20. 9*	19 57*	66.6	67.6	67.2	67.1	Ship yawing.	29	Light airs of wind Eaſterly, with calms. Some ſwallows and other land birds, who ſeem very tired. In the afternoon, during the calm, when the ſhip's head was to the Southweſtward, there was, for a little time, a counter current viſible; it made like a wake on the ſhip's larboard beam, as if ſhe was going broadſide foremoſt.
12	67½		30.3¾	67½		h. h. c. f. h. h.	NW by W. WNW. NW. NW by W. V. NW by W. NW by W. C. W by N. W.		16		4	11.52	12.24						38.28	36. 9	12.24			65.6	67.2	66.4	66.3	Ditto, needle very ſteady.	41	Light airs of wind throughout. P.M. ſaw two three-maſt veſſels with latine ſails; they were ſuppoſed to be Barbary cruizers, but did not come near enough to let us know what they were. Some ſwallows about the ſhip.
13	66¼	30.1	30.0¾	66	30.1	f. f. h. h. c.	W by S. WNW. WNW. NW by W. NW. NW. NW by N. NNE. N.		21	9		12.35	13.16						37.46	35. 6	13.16	20.17*	20.38*	66.	67.	66.4	66.3	Ditto, needle very unſteady, bad obſervation.	62	An increaſing breeze from the Northward. In the morning there were many petrils in the ſhip's wake: they continued throughout the day.
14	65	30.2½	30.2¼	65¼	30.2½	ſq. h. h. ſq. c. c.	NE by N. NNE. N. N. N. NNE.		20		8	15.0	15.33						36.36	33.30	15.33	19.28*	19.16*	64.6	65.6	65.2	65.1	Very ſteady.	138	Freſh breezes, with ſome ſqualls. At noon ſaw Porto Santo from the maſt-head, W by S. per compaſs.
15	67¾		30.2	67½		h. f. c. ſq. c. c.	NNE. NNE. NE by N. NE by N. NE. W by N. WNW. C. W.		25	14		15.59	16.46						35.50	[32.24]	16.46			64.2	65.6	65.	64.7		84	In *Funchal* road. Major SEARS informed us, that Mr. SEARL, in conſequence of our requeſt, tried the therm. for 10′ in a cool cellar, and found it 68°. N. B. Captain ALCOCK informed me, he obſerved the therm. on May 14, 1776, at 6 A.M. at *Funchal* 68°, and in the cellar 61°: and Mr. SEARL wrote to Mr. CAVENDISH, that on the 16th of May the therm. which ſtood at 69°, was carried down at 1 P.M. to a cellar, where it remained till 4 o'clock, and then was found to be at 62°, ſo that Major SEARS's account was probably erroneous.
16	65½	30.1½	30.1½	65½	30.0½	c. c. c. h.	W. W. V. NE by E. NE by E. E by N. E by N.	2			7	By acct from Madeira in [16.50] 16 56	16.41						31.18	31.20	16.41			63.2	64.6	64.	63.7		67	Firſt part, light airs. Middle and latter, pleaſant breezes and ſmooth weather; ſeveral boats came off from *Funchal*.
17	67½		30.1¾	67¼		h. h. c. c. c.	NE. NE by E. E by N. E by S. E by N. ESE.		18	2		17.3	16.50						29 57	29.41	16.50			62.2	63.6	63.	62.7		81 1273	Theſe 24 hours pleaſant breeze from Eaſtward.

1775	Th.	Marine Barometer				Weather and Winds.	D.L. A.O.		D.L. ☽ T.K.		Longitude from Greenwich							Latitude		Cor. Long.	Magnetical							ML.	T.S. denotes the temperature of the ſea-water taken up in a bucket about noon, and the thermometer immerſed in this bucket for ſome minutes.
																					Variation.		Dip						
																							Face						
		R.	S.	Th.	D.		N	S	W	E	A.	TK.	D.☽ T.K.	☽	S.	☉.	E D.	A.	O.		Az.	Amp.	E.	W.	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′		° ′ W	° ′ W	′ W	° ′ W			′	° ′ N	° ′ N	° ′ W	° ′ W	′ ° W	°	°	°	°		1273	
May 18	69	30.2	30.1¾	68½	30.2	h. ENE. h. ENE. E. h. E. ENE. h. E. ENE.		15		10	17.9	16.46						29. 4	28.33	16.46	*18.23		61.2	62.6	62.	61.6		53	Light breezes and ſmooth water. At noon, Peak of Tenerif S 50° E.
19	68	30.2½	30.2¼	67¾	30.2¼	h. E by N. h. NE by N. h. c. N by W. C. N by W. NNE. c. f. NNE.		6	1		17.17	16.55						27.53	27.16	16.55	16.53* *16.39	17. 6*	60.2	61.2	60.6	60.4		74	Pleaſant breezes from the Eaſtward. At noon, Peak of Tenerif (variation allowed) bore N 24° 30′ E, which bearing, and the difference of latitude places it 27′ to the Eaſtward of our ſituation at noon, when in 16° 55 long. by time-keeper, and conſequently by time k. 16 28 is the longitude of Peak of Tenerif, only 4′ leſs than Pere FEUILLE makes it; but, by the obſervations of the Moon, on the 21ſt and following days, it appears, the ſhip was 1° farther Weſt than the time-keeper repreſented, which difference aroſe ſince the 9th of May, if the Lunar obſervations were to be relied on.
20	68	30.1¼	30.1½	68	30.1¼	c. NNE. NE. c. NE. N by E. NE by N. N by E. c. N by E. NNE. c. NNE.		24		3	17.42	17.17						26.46	25.45	17.20	16.37* 15.42*	16.17* 15.42*	59.2	60.2	59.6	59.4	Very ſteady.	70	Light breezes and ſmooth water throughout. Several petrills in the wake.
21	68¼	30.1¼	30.1	68	30.1	f. c. NE by N. N by E. c. N by E. N by W. c. f. N by W. N by E. f. N by E. NNE.		1	4		18.18	17.57	57	18.54	4	☉	29	25. 5	24. 3	18. 3		15 36*	58.2	59.2	58.6	58.4		106	Pleaſant trade. In Captain EKEBERG's chart there being ſoundings laid down not far to the Eaſtward of our ſituation, ſounded at 8 P.M. but had no ground 40 fath. Several petrills in the wake of ſhip.
22	70	30.1½	30.1¼	70¼	30.1½	f. N. f. c. N. NNE. c. NNE. c. NNE. NE by N. NE.		18			18.49	18.28	66	19.34	3	☉	28	23.43	22.25	18.37	15.13*	*15. 2	56.4	57.4	57.	56.6		87	Light breezes with ſmooth water throughout. Many petrills. N.B. There was apparently an error in this day's long. by time-keeper. The ſucceeding days diff. long. was as much leſs as this day's was more than account. I have here corrected it as conformable to the Lunar obſervations. T.S. 69°.
23	68	30.2	30.1¾	68	30.2	f. NE. NE by N. f. NE by N. f. NE by N. f. NE by N. NE.				1	19.28	19.6	41 65	19 47 20.11	4 3	☉ ☉	47 71	21.54	[20.36]	19.18	14 35* *13. 9	*13. 7	54.	55.2	54.5	54.3		115	In the evening, the water appeared of a muddy green, like ſoundings; but did not ſound. An increaſing trade with fair weather, the water continuing of ſame colour. T.S. 69°.
24	68¼	30.1	30.0½	68¼	30.0¾	f. NE. NE by N. f. NE by N. f. c. NE by N. c. h. NE by N.		14	8		19.21	19.7	79	20.26	3	☉	37	19.21	17.49	19.22	13.56*	13.55*	51.	52.4	51.6	51.3	Much motion.	153	Theſe 24 hours a freſh trade, and moſtly fair weather, the water remaining the ſame as before. T.S. 68°½.
25	71¾	30.0	29.9½	72	29.9¼	h. N by E. h. N by E. h. N by E. h. NNE.		1	4		18.33	18.23						17. 1	15.28	18.41	13.18*	12.32*	48.6	49.4	49.1	48.6	Very ſteady.	150	Freſh trade and hazy weather. In the afternoon the ſea remarkably confuſed, breaking different ways. Sounded in the morning, but had no ground 40 fath. In the morning the water appeared blue again. T.S. 71°.
26	76½	30.0½	30.0	76½	30.0	h. NE by N. h. V. WNW. NW. h. NW. V. NNE. h. c. NNE. E by S. ESE.		8		2	18.37	18.25						16. 3	14.22	18.46			46.4	48.	47.2	46.7		59 2140	Light breezes chiefly. In the night, no ground 70 fath. There were many blubbers in the ſhip's wake, which made a very luminous appearance: they ſeemed in ſhape like a ſauſage about 8 or 9 inches long. In the day, ſea was covered with Portugueze men of war, of which took up ſeveral; alſo ſome pilot-fiſh and ſkip-jacks. T.S. 74°.

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D. ☾ T.K.	☾				A.	O.		Variation		Dip						
																						Az.	Amp.	Face E.	Face W.	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ N	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°	°		2140	
May 27	76¼	30.0¼	30.0	76	30.0	h. h. c. c. h. h.	SE by E. V. E by N. E by N. V. V. NNW. NE.	7			4	18.18	18. 2						15.32	13.48	18.26			46.	46.4	46.2	45.7		46	Light airs of wind, variable, with very damp weather. In the night, no ground 40 fath. Many fiſh about the ſhip; ſome under the quarter, darting through the water, and making ſtreaks of light in various directions, had a fine appearance. T.S. 75°.
28	78½	30.0	30.0	78½	30.0	f. f. f. h. h.	NNE. N. N. NW by N. NW by N. NW by N. WNW.	1			3	17.26	17. 7						14.28	12.45	17.34		13. 0*	44 4	45.	44.6	44.3	Very ſteady.	82	Light breezes throughout. In the night, lightning to the Eaſtward. Many luminous blubbers and fiſh about the ſhip in the night. Paſſed ſeveral turtle. Had ground at 11 A.M. 32 fath. coarſe ſand, with black ſpecks and ſhells. At noon, 30 fath. coarſe ſand and flat coral. T.S. 75°½.
29	80	30.1	30.1¼	80	30.1	h. h. h. h.	W. C. SW. SW by W. SW by W. C. S. V. SW. SW by W. ESE. ENE.		2		8	17.16	16.49						13.57	12.12	17.19	12.37*	12.44*	43 6	44.	43.7	43 4		37	Firſt and latter, light breezes. Middle, calm. Great many fiſh about the ſhip, and in the morning vaſt flocks of birds. Soundings, ſand of various kinds from 28 to 17½ fath. at 8 A.M.; at 9 A.M. 21 fath. blue mud; and at 11 A.M. no ground 35 fath. T.S. 77°.
30	77½	30.0¾	30.0¾	77	30.0¾	h. h. h. h.	ENE. NE. V. W by S. SW by W. C. C. W. C. NW by N. NNW. N by W.	2			3	17. 9	16.39						13.26	11.43	17.12		12.36*	42.6	43.4	43.1	42.6	Very ſteady.	32	Light airs and calm. At 5 P.M. 56 fath. green mud. At midnight, 45 fath. blue mud. In the night, the water very luminous when put in motion, and many ſhoals of fiſh looking like breakers. A.M. a turtle paſſed; vaſt flocks of ſea birds. At noon, the ſea covered with Portugueſe men of war, like the ground with leaves in Oct. 23 f. blue mud. T.S. 76°½.
31	80	30.0½	30.0	80	30.0	f. f. ſq. hr. ſq. hr. c. h. h. f.	NNW. NW. NW by W. E. E. C. ENE. E by S. NE.	1		10		17. 4	16.44						12.22	10.40	17.20	12.24*	12.42*	41.6	42.4	42.1	41.5		69	Moſt part pleaſant land and ſea breezes. At midnight, a hard ſquall from the land: it was preceded by great deal of lightning over the land, and long threatning before the ſquall came off. It roſe in a dark black cloud, with a white ſtreak like a bow under it, and below this very dark. It came off very hard, and raiſed the ſpray of the ſea in a foam. P.M. Soundings, 25 to 21 fath. ſand. A.M. No ground 60 and 40 fath. T.S. 80°.
June 1	82½	30.1	30.1	82½	30.1	f. f. f. c. h. h. c. ſq. h.	NNE. N. NNW. SW by W. W. V. C. NW. SE by E. SE.	10			10	16.51	16.11						11.40	10. 8	16.50	13. 7*	12.46*	41.	42.	41.4	41.	Very unſteady.	53	Major part, light breezes. P.M. No ground 40 to 80 fath.
2	82½	30.0¾	30.0¾	82½	30.0¾	h. h. h. h.	SE. W. W. C. W. W. C. WNW. W by N W by N.	17				16.25	15.45						11.14	9 59	16.26	12.35*	12.31*	40.4	41.2	40 7	40.3	Not very good obſervation.	39	Firſt and latter parts, pleaſant breezes from Weſtward. The middle, calm, with hot ſultry weather. At midnight, 80 fath. coarſe black ſand, with bits of coral. At noon, 26 fath. coarſe brown ſand. T. S. 81°.
3	82¼	30.0¼	30.0½	81¾	30.0½	h. L. to E. ſq. r. c. c. L. to E. h. f.	NW. NW. NW by N. E. V. V. S by W. V. E by S. ESE. E by S. E. ESE.		8		6	16. 6	15.20	35 62	15 55 16.22	3 3	⊙ ⊙	3 20	10.38	9.15	16.09	12.48*	12.55*	38.6	39.6	39.2	38.6	Very ſteady.	45	Major part, light airs. Many ſharks about the ſhip; above a dozen in ſight at once; caught one. P.M. Soundings 27 to 35 fath. At noon, no ground 88 fath. T.S. 80°½.
4	81¼	30.0½	30.0½	80½	30.0½	f. c. L. all round, ſq. ſq. ſq. c.	SE. SSE. SE by S. SSE. S by E. SSE. S by E. S by W. SSW. C. C. NNW.	10			10	16. 2	15. 6						10.23	9.10	15.58			38.4	39.2	38.7	38 3		34	The firſt part, light breezes of wind from the Southward. The latter, moſtly calm, with hot weather. In the evening, the clouds very remarkable; ſome appearing like dirty wool, and apparently very near all round the horizon; the ſky above, in many places, a fine pink, and blueiſh grey beneath it. In the morning, many grampuſſes about the ſhip. At noon, ground 60 fath. T.S. 83°¼.
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1755	Th.	Marine Barometer,				Weather and Winds.	D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	
																					Variation		Dip						
																							Face						
		R.	S.	Th.	D.		N	S	W	E	A.	TK.	D. ☽ T.K.	☽				A.	O.		Az.	Amp	E.	W.	MD.	C.D.			
		In.Dec.	In.Dec.	°	In.Dec		′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		2577	
											W	W	E	W				N.	N.	W	W	W							
June 5	8(¾	30.0¾	30.0½	80¼	30.0½	h. c. C. W by S. c. L. all rd. r. W by S. WSW. V. NNW. r. h ſq. and hr. ſq. r. NNW. SE by E. E by S. V. h. V. S by E. SSE.	10			20	15.43	14.28						9.43	8.40	15.43			38.2	38.4	38.3	37.7		48	Moſtly light breezes. Paſt 2 P.M. a hard ſquall, with great deal of thunder, lightning, and rain. P.M. a boat came on board from the Polly, a whaling veſſel, from Boſton in New England; the veſſel was hull down when they came aboard. A.M. ſpoke with the Mary, Captain JONES, from Liverpool to Sierra Leon. P.M. 40 to 36 fath. coarſe ſand. A.M. no ground 55 fath. T.S. 83°¼.
6	83	30.0¾	30.0¾	83	30.0¾	f. C. V. f. L. to Eaſtw. SW by W. h ſq. r. L. all rd. r. c. E by S. SE. E. E by N. c. f. E by N. C. SSE. S by E.	11		8		15.41	14.34						9.12	8.20	15.53	*13.33		36.6	37.2	37.	36.4	Very ſteady.	38	Moſtly light airs and calms. At midnight, a violent guſt of wind came off: its violence did not continue above a minute or two; but brought much rain, and was attended with thunder and lightning. A.M. no ground 88 fath. T.S. 82°.
7	82½	30.1½	30.1¼	82¼	30.1¼	h. SE by S. S by E. C. h. c. V. SSE. SE by S. c. ſq. S by W. V. C. ſq. c. C. S by E. SSE. S.	11		19		15.41	14.53						8.56	8.15	16.16		12.28*	36.6	37.6	37.2	36.6			Light airs chiefly: a long ſwell from the SW. T.S. 82°½.
8	83	30.1¼	30.1¼	83	30.1¼	c. hr. and L. to s.w. S. C. V. SW. ſq. c. ſq. SW. SW by W. SW. c. C. c. f. C.	23			12	15.22	14.22						8.33	8.15	15.49			36.6	37.6	37.2	36.6	Very unſteady, great ſwell, and no ſail.	30	Firſt, light airs. Middle, freſh breezes and ſqually. Latter. calm. At midnight, carried away the main and fore-top-maſt by the badneſs of the rigging. Had, for ſome hours, a pretty freſh SW wind; but not enough to have endangered the top-maſts had the rigging been good. At 11 got fore-top-maſt up. T.S. 83°.
9	84	30.0½	30.0½	84	30.0½	h. C. h. L. to weſtw. C. h. c. C. W by S. c. W by S.		3		3	15.18	14.14						8.29	8. 8	15.46			36.4	37.6	37.1	36.5	Pretty ſteady.	6	Moſtly calm, with ſwell from Southward. At 9 A.M. got up main-top-maſt. T.S. 82°.
10	81¼	30.0½	30.0½	80¾	30.0	f. c. ſq. r. W. NNE. ſq. r. c. NNE. V. C. c. L. to Ed. hr. C. V. C. ENE. r. c. ENE. V. SW by W.	3		19		15.0	14.15	53	15.8	5	*S	48	8. 1	7.43	15.51			35.6	36.6	36.2	35.6	Very ſteady.	35	Firſt, fair. Middle, ſqually, with hard rain. Latter, variable, with calms. T.S. 81°½.
11	77¼	30.0½	30.0½	76½	30 0½	c. ſq. r. SW. SW by S. c. f. c. ſq. r. SW. ſq. r. SSW. SW. WSW. hr. r. WSW. V.	30			24	14.19							7. 9	[7.14]	[14.53]			34.6	35.6	36.2	35.6	remarkably ſteady.	64	Cloudy and rainy, with a gentle breeze: great ſwell from Southw. T.S. 81°.
12	82	30.0¾	30.0¾	82	30.0¾	hr. V. SW. fr. r. c. SW. SW by S. SSW. c. r. SSW. C. V. c. C. V.					14.4	12.55	58	13.53	3	*S	39	6.53	7. 5	14.39			35.2	35.4	35.3	34.7	Very ſteady.	22	Calm and cloudy: great long ſwell from Southward. A.M. a very large ſhark was ſtruck with the harpon; but it broke the harpon, and got off. Many fiſh and birds. T.S. 82°.
13	81½	30.0½	30.0½	81½	30.0½	c. WNW. NW. c. L. to weſtw. NW. c. NW. NW by N. c. th. L. to SW. V. NNE.				2	13.50	12.39	115	14.34	3	*S	15	6.25	6.37	14.27	13.18*		32.4 32.6	33.4 32.6	32.6	32.1	Tightened the ſcrews.	31	Light airs and cloudy through. Many fiſh and birds. P.M. no ground 70 fath. A.M. hooked a ſhark. T.S. 81°½.
																												2882	

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical						ML.	
																						Variation		Dip					
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D.☾ T.K.	☾				A.	O.		Az.	Amp.	Face E.	Face W.	MD.	C.D.		
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ N	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°	°	2882	
June 14	82¼	30.0¼	30.0¼	82¼	30.0	c. c. c. hr. c. r. c.	V. C. SW by S. SSW. SSW. SW. C. V. S by E.	15		4		13.20	12.14	120	14.14	3	*An.	48	6. 5	6.32	14. 6		13.28*	32.6	33.6	33.2	32.5	37	In the night, many fiſh. A.M. ſtruck an albicore; it has from the back fin to the tail nine little yellow fins, and nine more ſuch from the belly fin to the tail. Beſides the fin on the back, it has another fin, compoſed of a thin membrane, with ſharp prickly ribs; this fin it can ſtrike, having a groove to receive it, ſo that there remains no projection or appearance of it. Light airs. No ground 65 to 70 fath. T.S. 81°¼
15	83	30.0¼	30.0¼	82¾	30.0	h. h. f. c. r. c. c. T. to s.e.	S by W. S. SSW. SSW. SSW. SW. V. V. SW by W. SSW. SW.	15			7	12.39	11.26						5.32	6.14	13.18		13.32*	32.	32.4	32.2	31.5	54	Light breezes, with a ſwell from the Southward. T.S. 82°.
16	82	30.0¼	30.0¼	82	30.0	c. ſr. ſq. r. ſq. L. to n.e. c. c. r. c.	SW. V. S by W. S by W. V. C. SW. SW by S. SW by S. C. V. C. V.	5			24	12.27							5.18	6. 5	[12.59]			31.6	32.	31.7	31.2	19	PM. many fiſh; but ſwimming very deep. A.M. caught three ſharks. Moſt part light airs and calm with rain. T.S. 81°½
17	79½	30.0¾	30.0¾	78½	30.0¾	ſq. r. ſq. r. c. c. r. c. c. hr. c.	V. S by W. V. SSW. SSW. S. SW. SW by W. WSW. SW by W.	7				11.58	10.21						4.55	5.49	12.13			30.	30.6	30.3	29.6	43	Firſt part, ſqually, with rain and wind Southerly. The latter, light airs S.W. cloudy and rain. A.M. appearance of land to Eaſtward under the clouds, but very obſcure, being thick and hazy weather. T.S. 81°.
18	80½	30.0¾	30.0¾	80¼	30.0¾	c. ſq. c. c. c.	SW by W. SW. C. W by N. W by N. W by S. V. C. C. NE. NE. ENE.		7		5	11.44	10. 2						4.36	5.23	11.54			29.2	30.	29.5	28.7	24	Pleaſant weather. A.M. ſome dolphins. Light airs of wind, variable with calms. T.S. 81°½.
19	80½	30.0½	30.0½	80	30.0½	h. L. to nd. c. c. c. ſr. c.	NNE. C. V. V. WSW. WSW. W by S. V. V. C. SW by S.	5			1	11.29	9.46						4.15	5. 7	11.38	13.30*	13.50*	28.6	29.6	29.2	28.4	26	Light airs, with lightning and ſome thunder in the night. In the morning, it looked very black, but was not attended with any ſquall. T.S. 81°.
20	82	30.0¾	30.0¾	81	30.0¾	c. c. L. ſq. r. c. c. c. r.	SW by S. SSW. SW by S. SW by S. SSW. SW by S. SW. SSW. SSW. V. S by W. S by E. C. SE by S. V.	16			5	10.52	9. 4						3.49	4.57	10.56	14.23* *14.43	14.41*	28.6	29.6	29.2	28.4	46	Moſtly light breezes and cloudy, with rain. I aſcribe the error of this day's log partly to the courſe having made no allowance for lee-way. T.S. 82°.
21	79	30.0½	30.0½	79	30.0½	c. c. L. from n. to s.e. ſq. r. r. hr. hr. c. r.	S by E. S. SSW. SSW. SW by S. SSE. S. S. S by E. C.	13		3		10.31	8.46						3.45	[4.54]	10.38	14.40*		28.4	29.4	29.	28.2	44	Firſt and middle parts, light breezes, with ſome ſqualls, and heavy rain. The latter, calm, with cloudy weather and rain. In the morning, at 8 P.M. ſaw the land, bearing E by S 7 leagues. Sounded 46 fath. mud; but there was the mark of rock on the arming of the lead. At 10 A.M. the extremes of the land from N by E½E to E diſtance about 7 leagues. The N extreme I ſuppoſe is *Punta Baixas* near *Seſtos* river, and the Southern extreme ſuppoſed about *Botoa*: There was a hill, viſible inland, to the left, which was ſuppoſed to be that of *Baſſa*. T.S. 81°.
22	80¾	30.0¼	30.0¼	80½	30.0¼	hr. hr. hr. ſq. hr. ſq. r.	C. SSW. V. C. C. ESE. V. V. SSE. V. V.				13	10.50	8.52						3.19	4.39	10.44			27.6	28.4	28.1	27.3	35	At Sun-ſet, the extremes N¾E to E¾S (per compaſs) diſtance off ſhore about 6 leagues. 43 fath. blue mud. Variable winds, with very much hard rain. T.S. 81°.
																												3210	

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							M L.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Variation.		Dip						
																						Az.	Amp.	Face		MD.	C.D.			
																								E.	W.					
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ W	° ′ W	′	° ′ W			′	° N ′	° ′ N	° ′ W	° ′ W	′ ° W	°	°	°	°		3210	
June 23	82	30.0	29.9¾	81¾	30.0	r. c. c. ſq. r. c. c. h.	SSE. S. S by W. S by W. S. S by E. S by E. SSE. S. S by W. S.	12		1		11.13	9.16						3. 0	4.32	11. 6			28.	28.4	28.2	27.4	Very unſteady.	54	Moderate breezes. T.S. 81°.
24	80½	30.0	29.9¾	80	29.9¾	h. ſq. r. ſq. r. c. c. ſq. c. c. ſq. r.	S. S by W. SSW. S by W. S by W. S by W. S.	3		3		11.42	9.48						2.53	4.28	11.37			28.4	29.4	29.	28.2		73	Moſt part a freſh gale from Southward, with ſqualls and rain. T.S. 81°.
25	77¼	30.0½	30.0½	76½	30.0	h. c. c. c. c. r.	S. S by W. SSW. SSW. SSW. SSW. V. C. W by S.	21			52	11.16							2.35	[4.21]	[11.11]			27.4	27.6	27.5	26.7	Pretty ſteady.	58	Moſt part freſh breezes. At 8 P.M. Richard Jones, the ſurgeon's lad, fell over-board. Hove the ſhip to, and ſent jolly boat and yawl in ſearch of him; but they could not find him. No obſervation for latitude or time, not having one glimpſe of the Sun all the forenoon. P.M. no ground 50 fath. T.S. 80°½.
26	80	30.0½	30.0¼	80½	30.0½	hr. c. ſq. ſq. r. r. r. c.	V. SSW. SW by S. SW by S. S by W. SSW. S by W.					10. 2	7.40						2.23	4.16	9.26			26.4	27.4	27.	26.2		58	A freſh breeze with much rain. P.M. no ground 70 fath. T.S. 80°½.
27	80¼	30.0½	30.0½	80¼	30.0½	c. ſq. c. ſq. ſq. c. c.	SSW. SW by S. SSW. SSW. S by W. S by W. S. S. S by W. S.		24		44	10. 6	7. 0						2.13	3.42	8.45			25.4	26.	25.6	25.		73	Moſtly freſh breezes. At 2 P.M. from maſt-head *land*, making like iſlands, was ſeen bearing E by N=ENE½N, ſuppoſed Cape Palmas. P.M. no ground 70 fath. At 8 P.M. ſpoke with a French ſhip from *Havre* to the coaſt of *Angola*. T.S. 80°.
28	80½	30.0¾	30.0¾	80¼	30.0¾	h. h. ſq. f. c. ſq. c. c. f.	S. S by E. S by E. S. S. S by E.		13		2	11.10	8. 2						1.34	2.50	9.45	14.42* *14.11		24.4	25.2	24.7	24.		76	Freſh breeze throughout, and a large Southerly ſwell. T.S. 80°¼.
29	79½	30.1	30.1	79	30.1	c. c. c. f. f.	S. S by E. S. S by E. S by E. S. S by E.		20	39		12.18	9.48						1. 0	1.56	11.29	14.37* *13.44	14.25*	23.6	24.4	24.1	23.2	Very unſteady.	79	Freſh breeze throughout. P.M. cloudy. A.M. fair. T.S. 79°½.
30	78½	30.2	30.1½	78½	30.1	f. f. c. c. f. f.	S by E. S by E. S by E. S by E. S.	1		77		13.21	12.8						0.14	1.11	13.48	13. 6* *12. 7		23.6	24.4	24.1	23.2	Pretty ſteady.	78	Freſh breezes with fair weather. P.M. many porpoiſes. Some bottle noſes, and vaſt flocks of flying fiſh. A.M. a man of war bird. T.S. 76°¾.
July 1	77½	30.1½	30.1½	76¾	30.1	c. c. c. c. f.	S. S. S by E. S. S. S by E. S.	21		76		12.35	12.38						0.16	1.34	14.17	13.17*		24.6	24.4	24.5	23.6		66	Major part moderate and cloudy. T.S. 78°.
2	78½	30.1¼	30.1	78	30.1	h. h. c. c. c.	S by E. S. S by E. S by E. SSE. S by E. S. S. S by E. S.	14		62		13.33	14.38						S 0.22	1.10	16.16	12.41*	12.47*	24.6	25.4	25.1	24.2	N.B. going to *Weſtward* encreaſes dip.	70	Pleaſant breeze, with fair weather and ſmooth water. T.S. 76°.
																													3895	

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A.T.K.		Longitude from Greenwich				S.	O.	E.D.	Latitude		Cor. Long.	Magnetical Variation		Magnetical North Dip Face					ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D.☾ T.K.	☾				A.	O.		Az.	Amp.	E.	W.	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		3895	
July												W	W	E	W				S	N	W	W	W							
3	79	30.0¾	30.0¾	79	30.0½	h. h. h. ſq. c. c.	S. S by E. S. S by E. SSE. S by E. S. S by E. S by E. S by E. SSE. S by E. SSE.		3	35		14.56	16.36						1. 6	0.17	18.13	11.37*		24.2	24.6	24.4	23.5		97	Freſh breeze throughout. T.S. 76°.
4	77½	30.1	30.0¼	77	30.0½	h. h. h. f. c. c. f.	SSE. SE by S. SE. SE by S. SE by S. SE. SE by S. SE.		14	30		15.44	17.55						2.13	S 1. 8	19.29	10.31* *9. 0	*8.40	22.2	22.6	22.4	21.5	Very ſteady.	86	Pleaſant trade wind, with a Southerly ſwell. T.S. 76°½.
5	78½	30.1¼	30.1¼	78½	30.1	h. h. f. f. c. f. f.	SE. SE by E. ESE. ESE. ESE. SE by E. SE by S. SE.	2		15		16. 4	18.30	93	20. 3	4	0	26	3.28	2.21	20. 3	8.59* *8.32	8.59*	19.6	20.6	20.2	19.3	Extremely ſteady.	80	Night, ſea luminous ſuppoſed blubber. Major part, pleaſant breezes, with a ſwell from SE. T.S. 76°½.
6	79¾	30.1	30.0¾	79¾	30.0½	f. f. c. c. ſq. r. c. c. ſq. r.	SE by E. SE. SE by E. SE. SE. SE by E. SE by S. SE by S.	12		29		16.49	19.44						4.56	3.37	21.20	8.37*	8.54*	19.2	20.2	19.6	18.7	Great ſwell.	99	A.M. great ſwell. In the forenoon, hard rain, ſmall drops, but very cloſe. Firſt part, freſh trade; latter, ſqually and ſome rain. T.S. 77°½.
7	80	30.0½	30.0¾	80	30.0½	c. c. f. f. c. c. ſq.	SE. SE by S. SE. SE. SE by E. SE. SE by E. SE by E.		14	8		17.39	20.42						6.22	5.17	22.20	7.52*	7.49*	15.4	16.2	15.7	15.	Very great ſwell.	101	Great ſwell. The barometers very unſteady. Freſh gales and cloudy. T.S. 78°½.
8	79½	30.0½	30.0½	79¼	30.0½	ſq. r. ſq. ſq. c. c. c. ſq. r. h. f.	SE by E. SE. SE. SE. SE. SE by E.		14		5	18.42	21.40						8. 1	7.10	23.20	*6.26	*6.33	11.	12.6	11.7	11.	Pretty ſteady, though great ſwell; touched the ſcrews, and found the ſame.	118	Ditto. Ditto Strong gales and ſqually. T.S. 78°.
9	79½	30.1½	30.1¼	79½	30.1½	f. ſq. ſq. f. ſq. c. c.	ESE. SE by E. SE. SE. SE. SE by E. SE by E. SE.		3		14	19.45	22.29						9.45	8.57	24.11			7.2	8.4	7.7	7.	Pretty ſteady.		to. Freſh gales throughout. T S. 78°.
10	77½	30.1½	30.1¼	77½	30.1½	f. f. ſq. c. ſq. ſq.	SE. SE by E. SE by E. SE. SE by E. SE by E. ESE. SE.		5		21	20.37	23. 0						11.33	10.50	24.44	5.44*	5.32*	3.6	5.0	4.3	3.4	Ditto, but great ſwell.		Ditto. Saw a pettril. Freſh gales from SE. with a large ſwell. T.S. 77°.
11	77	30.2¾	30.2½	76¾	30.2½	h. ſq. r. c. c. ſq. ſq. c. c. f.	SE. SE by E. SE. SE by E. SE. SE. SE by E. SE by E. SE.				8	21.42	23.57						13. 7	12.24	25.43	*4. 0		2.2	2.4	2.3	1.4	Not ſteady.		Major part freſh gales and ſqually, with a great confuſed ſwell. P.M. a weather gall. A.M. Swell much abated. Towards noon, moderate and fair. T.S. 75°.
																								South Dip.						
12	76½	30.3	30.2¾	76½	30.2¼	h. h. f. f. c. c. ſq.	SE. SE. SE by E. SE by E. SE. SE by E.		1		4	22.29	24.40						14.48	14. 6	26.28	4.15*	4.20*	1.4	1.2	1.3	2.2	Pretty ſteady.		Pleaſant trade wind. Swell very much abated. A.M. ſaw a bird, ſuppoſed to be a ſheerwater. Mr. ROBERTS ſaw a man of war bird. T.S. 75°½.

1775	Th.	Marine Barometer,				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical								M L.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Variation		Dip						
																						Az.	Amp.	Face		MD.	C.D.			
																								E.	W					
		In.Dec.	In.Dec.	°	In.Dec			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		4942	
												W	W	E	W				S.	S.	W	W	W							
July 13	76	30.2¾	30.2½	76	30.2½	h. ſq. r. ſq. r. c. c. c.	SE by E. SE by S. SE by E. E by S. SE. SE. SE by S. SSE. SE by S. S by E. SSE.	2		6		23.30	25.47						16.17	15.33	27.37	*2.43	*2.42	3.4	3.4	3.4	3 4		111	Firſt part, freſh gales and ſqually. Latter, moderate and fair. A.M. Fog Bank exactly like an iſland, the outline perfectly well defined, except the extremities: I never before ſaw any cloud ſo like land. T.S. 74°. Changed the poles of the dipping-needle. Mean of the various trials changed and re-changed 3½ S. viz. E. W. MD. Changed the poles, marked end down, 4.4 4. 4.2 Re-changed, ditto up, 2.6 3. 2.7 Ditto, ditto down, 4.4 4.6 4.5 Ditto, ditto up, 2.4 2.4 2.4 Mean 3.4 3.4 3.4
14	76	30.3¼	30.3	76	30.2½	f. ſq. ſq. f. c. ſq. c. c. f.	SE by S. SE. SE by E. SE by S. SE by S. SE. SE. SE by E. SE.	3		9		24.27	26.53						17.46	16.59	28.45	1.48* *1.45	1.36* *1.49	5.2	5.4	5.3	6.2	Not very ſteady.	104	Conſtant trade wind. T.S. 74°.
15	76¼	30.2½	30.2½	76½	30.2¼	f. c. ſq. c. r. c. ſq. r. ſq. r. c. c. h.	SE. SE by S. SE. SE by E. SE by S. SSE. V. SE. SE by E.				1	25.20	27.45						18.58	18.11	29.39	*1.21		7.4	8.	7.6	8.5		88	Firſt part, moderate. Middle, hard ſqualls and rain. T.S. 74°½.
16	74½	30.3½	30.3	74½	30.2¾	c. c. c. c.	SE. SE by E. SE by E. ESE. E by S. SE by E. E by S. SE by E. SE. ESE.		1	1		25.42	28. 8						19.47	19. 1	30. 4	0.42*		9.2	9.6	9.4	10.3	Pretty ſteady.	54	A.M ſaw a bird like a booby, but ſhorter winged and necked, called by ſailors, poor John. Light breezes, ſwell much abated. T.S. 74°.
17	73	30.4	30.3¼	73	30 3½	c. c. ſr. ſq. ſq. ſr. ſq. ſr. c. ſq.	SE by E. V. SSE. V. ESE. SE by E. V. SE. SE by E. V. SE. E by S. ESE.	2		5		26. 2	28.33	105	30.18	3	*At.	31	20.47	19.59	30 31			11.	11.2	11.1	12.		69	P.M. to the NE. the clouds very remarkable, being in white curved rays, like the variation chart. At 7 A.M. ſaw Trinidada from maſt-head SSE. At 9 viſible from deck. At noon, Trinidada S 36° E 11 leagues. Major part, moderate breezes and cloudy weather; winds variable and ſmooth water. By the bearings of Trinidada at noon, allowing it to lye in 20° 27′ S according to Dr. HALLEY. Its longitude per T. K. 28°.13′ W 28°.13′ Mean diff. T.K. and ☽ 8 obſ. ☉ and 1 ✱ 1.58 8 obſ. ☉ 2.12 Long. 8 obſ. ☉ and ☽ 1 obſ. *At. 30.11 8 obſ. ☉ & ☽ 30.25 By Dr. HALLEY, 29.50 29.50 Diff. 0.21 0.35 T.S. 74°.
18	75½	30.4	30.3½	75½	30.3½	f. f. c. c. c. f.	SE by E. SE. SE by E. SE by E. SE. SE. E by S. ESE. E by S.		8	4		26.29	29. 4	138 120	31.22 31. 4	3 3	☉ ☉	11 23	22. 9	21.29	31.15	E 0.20*	E 0.13*	13.	13.	13.	13.7	Very unſteady.	87	At Sun-ſet, Trinidada E by S ½ S 8 or 9 leagues. T.S 76°.
19	73½	30.4	30.3	73½	30.3	c. ſq. c. ſr. ſq. r. ſq. r. f. ſq. r. ſq. r. c. f.	ENE. V. ESE. V. C. NE. V. C. N. V. N.					26.12	28.47	145	31.12	3	☉	15	22.48	22. 8	30 59		0.44*	14.4	14.4	14.4	15.3	Pretty ſteady.	47	Moſtly light breezes and cloudy. T.S. 74°.
																													5502	

1775	Th.	Marine Barometer				Weather and Winds.		D L A.O.		D. L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D. ☾ T.K.	☾				A.	O.		Variation		South Dip						
																						Az.	Amp.	Face		MD.	C.D.			
																								E.	W.					
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ S	° ′ S	° ′ W	° ′ E	° ′ E	°	°	°	°		5502	
July 20	75	30.4	30.3½	74½	30.3	f. f. f. c. f. f.	C. C. NE. C. V. E. ENE.		3	5		26. 8	28.48	137	31. 5	3	⊙	12	22.57	22.20	31. 0		*0.44	14.6	15.	14.7	15.6	Not very ſteady.	10	Moſtly calm throughout, with ſmooth water. T.S. 74°½.
21	73	30.4	30.3¾	73¼	30.3¼	f. f. c. c. h. h. c.	C. ENE. ENE. E by N. E by N. ENE. ENE. NE.		4			25.35	28.15	115 128	30.10 30.23	3 4	⊙ ⊙	29 16	24. 7	23 34	30.27	*0.42	0.55* *1. 5	17.4	18.	17.6	18.5	Extremely unſteady, the ſhip having an irregular motion, tho' ſmooth water.	76	Major part light breezes, with ſmooth water. T.S. 72°.
22	74¼	30.5	30 4½	74	30.4¼	f. f. h. ſq. fr. c. f. f.	NE. NE. V. V. NE by E. V. V. ENE.		2		8	24.49	27.21	174 94	30.15 28.55	5 3	⊙ ⊙	22 18	25.10	24.39	29.33	0.11* W *0.15	0.17* W *0.22	19.4	20.4	20.	20.7	Very ſteady.	76	Pleaſant breeze and ſmooth water. T.S. 72°.
23	74	30.6	30.5½	74	30.5	f. f. f. f.	E. E by S. E. E by N. E. E by S. V. SE by E.		7	8		24.55	27.35	147 135 140	30. 2 29.50 29.55	3 3 3	⊙ ⊙ ⊙	24 16 20	26.12	25.48	29.47	E 0. 6*	E 0.11*	21.	21.6	21.3	22.2	Extremely ſteady, though long ſwell.	65	Pleaſant breezes; a long ſwell. T.S. 70°.
24	71¼	30.6	30.5½	71½	30.5	f. f. f. c. c.	SE by E. SE. SE by E. ESE. ESE. ESE. SE by E.	2		14		25.20	28.12						27.44	27.18	30.24	1. 0* *1.13	1.10*	23 4	24.	23.6	24.5		96	Pleaſant breeze. At 10 A.M. ſaw a ſail bearing S by W. T.S. 69°.
25	72½	30.6	30.5½	73	30.5	c. c. c. h. h.	ESE. SE. SE by E. SE by E. ESE. SE by E. V. SE.		2		3	25.49	28.38						28.54	28.30	30.50	2.12* *1.52	2.16* *1.27	26.	27.	26.4	27.3	Very ſteady.	76	Light breezes throughout. Paſſed by the ſail at midnight; i was a ſmall two-maſt veſſel. At 6 A.M. ſaw the veſſe a-ſtern. T.S. 69°½.
26	71	30.6	30.5½	71½	30.5	c. c. ſq. with fr. ſq. with fr. h. h. f.	E by S. SE by E. SE. V. SE by E. SE by E. V. SE. SE by E. V.		4	6		26.23	29.18						29.55	29.35	31.29		1.52*	27.2	28.	27.5	28.4		69	Winds moſtly variable. T.S. 67°¼.
27	70¼	30.6	30.5½	70¼	30.5	f. f. f. f.	ESE. SE. SE. SE by E. ESE. V. V. ESE. E. E by S.		6		4	26.36	29.27						30.36	30.22	31.37	*3. 0	*3.14	27.6	28.6	28.2	29.1		43	Light airs. T.S. 63°.
28	68	30.5½	30.4¾	68¼	30.4½	f. f. f. c. c. f.	V. C. C. NE by E. C. WNW. W by S.		6	9		26.18	29. 0						30.45	30 37	31. 8	2.45*	2.16*	27.6	28.6	28.2	29.1		18	Moſtly calm. T.S. 66°.
29	66¼	30.4¼	30 3½	66¾	30.3¼	h. c. c. c. ſq. with r.	W by S. V. V. NW. NW. V. V. WNW. NW by W.		6	3		25.21	27.56						31. 5	31.33	30. 2	*2.10		29.	30.	29 4	30.3	Very unſteady.	53	Major part light breezes. T.S. 67°½.
																													6084	

1775	Th.	Marine Barometer R.	S.	Th.	D.	Weather and Winds.		D.L. A.O. N	S	D.L. A. T.K. W	E	Longitude from Greenwich A.	TK.	D.☽ T.K.	☽	S.	O.	E.D.	Latitude A.	O.	Cor. Long.	Magnetical Variation. Az.	Amp.	South Dip Face E.	W.	MD.	C.D.		M L.	
	°	In.Dec.	In.Dec	°	In.Dec.			'	'	'	'	° '	° '	'	° '			'	° '	° '	° '	° '	' °	°	°	°	°		6084	
ly 30	65¼	30.2¼	30.1¾	65¼	30.1½	c. ſq, r. c. ſq. r. ſq, r. c. c. c. ſq.	NW by W. NW by W. NW by N. NW by N. NW by N.		7		5	W 22.36	W 25. 6						S 32. 3	S 32. 8	W 27.10	E 2.26* *1.27	E *1.42	31.3	32.3	31.7	32.5	Not ſteady.	152	An increaſing gale from NW quarter, with frequent ſqualls. 9 P.M. bar. 30.1¾. 8 A.M. 30.2¼. T.S. 65°½.
31	62		29.8	62		f. c. ſq. r. ſq, r. ſq. r. hſq. hſq, r. ſq, hr. hſq.	NW by N. NW by N. NWbyN. NNW. NbyW. N.	5		26		19.14							33.14	[33.19]	[24. 3]	0.44*						No obſ. too much motion.	184	Strong gales, with hard ſqualls and rain. 9 P.M. bar. 30.1½. 12. 30.1. 8 A.M. 29.9½. 10. 29.9. 11½. 29.8½.
Aug. 1	61¼		29.8½	61¼		ſq, r, L. ſq, r, L. ſq, r. ſq. c. c.	NNW. NNW. NNW. NW. WNW. WNW. W by N.					16.28	19.24						33.35	33.35	21.22			34.	35.	34.4	35.2	Very unſteady.	141	Firſt part, blowing very freſh from N.W. Latter, more moderate, with very large ſea. Bar. 1¼. 29.7½. 2½. 29.7. 4. 29.7½. 6. 29.8. 8. 29.8. 10. 29.8. A.M. 7. 29.8.
2	58½	29.9	29.8¼	58½	29.8½	h. h. c. ſq, r. L. ſq. c.	W. W. V. W by S. W by S. WSW. WSW. V. W by S.	2			16	14.53	17.33						34. 9	34. 7	19.28	W *2.35		33.4	34.4	34.	34.6	Unſteady.	86	Major part, light breezes, with great ſwell.
3	55½	29.3	29.2½	55½	29.2¼	e. ſq, r. L. to e.n.e. h. ſq. ſq. L, r. c. L, r. c. L, r. ſr.	SW. V. W. NE by N. ENE. V. NEbyE. N. WNW. V. W.		1		5	13.56	16.29						34.26	34.25	18.21		W 3.18*	34.4	35.4	35.	35.6	Not very unſteady.	55	Winds variable, with ſqually weather and confuſed ſea. bar. 3 P.M. 29.8 6. 29.7¾. 10. 29.7. 8 A.M. 29.3 9 A.M. 29.2¾. About noon, it appeared very threatning to the Northward, but the clouds diſſipated.
4	54¾		29.8	54¾		ſq. c. r. ſq, r. hard gales. ditto.	W by N. V. W by S. V. S by E. S by E. S by E. SSW.	2		12		11.45	14.30						33.37	33.34	16.19							No obſ. too much ſea.	129	Firſt part, ſqually with ſome rain. The middle, exceſſive hard gales, with a great ſea; and the ſpray ſo thick that the ſhip was covered with it. 2 P.M. bar. 29.2¾. 4. 29.2. 6. 29.2¾. 9. 29.5. 7 A.M. 29.7½. 9. 29.7¾. 11. 29.8.
5	51¾		30.0½	50¾		h. ſq, r. ſq, r. ſq, hail. ſq, hail. ſq, r. hail. ſq. ſq. ſq, hail. hſq, hail.	SSW. SW by S. SW by S. V. SSW. S by W.	11			35	9.24	11.34						33.37	33.23	13.20					35.	35.6	Very unſteady.	117	Squally weather, with much hail and rain, and a large ſwell. Bar. 4 P.M. 29.8½. 6. 29.9. 8. 30.0. 7 A.M. 30.0¼. 9 A.M. 30.0¾.
6	53		30.2¾	52		ſq, r. ſq, hail. ſq, r. hail. ſq, r. c. c. ſq. ſq, r. ſq, r. ſq. ſr.	SSW. S by W. S by W. S. S. S. S by E.	14			2	7.19	9.27						33.37	33. 9	11.10								103	Firſt and middle, freſh gales and ſqually. Latter, moderate; great ſwell. AM. ſome ſilver birds. Bar. 2 P.M. 30.0¾. 5. 30.1. 10. 30.2. 7 A.M. 30.2. 9. 30.3.
7	56¾		30.0½	56		c. c. f. h. h. c. ſq, r. ſq, r.	S by E. C. NNE. C. NNE. NE by N. V. NNE. NNE. NE by N.		25		6	6. 5							33 37	[33.21]	[9.53]								62	Firſt, light airs, with cloudy weather. Latter, freſh gales, with rain. P.M. Venus appeared very dim and fuzzy; a rim round the Moon. 9 A.M. bar. 30.1½. 11. 30.0¾.
8	60¼	30.1	30.0	60	30.0	ſq, r. ſq, r. c. ſq, r. ſq, r. ſq, r. f.	NNE. NNE. NNE. V. N by E. N. V. NNW. V.					3.55	5.57						33.51	33.48	7.37								109 7222	Firſt and middle, hard gales, ſqually with rain. Latter, moderate and hazy; great ſwell. A.M. ſome ſilver birds, a pintado bird. Bar. 2 P.M. 29.9½. 8 A.M. 29.9½. 9. 29.9¾. 10. 30.0. 30.0¼.

1775	Th.	Marine Barometer, R.	Marine Barometer, S.	Marine Barometer, Th.	Marine Barometer, D.	Weather and Winds.		D.L A:O. N	D.L A:O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D.☽ T.K.	Longitude from Greenwich ☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W	Magnetical South Dip MD.	Magnetical South Dip C.D.		ML.	
		In.Dec.	In.Dec.	°	In.Dec			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		7222	
Aug. 9	62½		30.0½	62½		f. f. ſq. h. ſq, r. ſq, r. r. ſq. ſq. ſq, r.	NW by N. NNW. NNW. N by E. N by E. N. N.		8		17	W 1.29	W 3.14	E	E				S 34. 6	S 34.11	W 4.51	W 8.50*	W 8. 1*						122	Firſt, moderate breezes and fair. Latter, freſh gales, with ſqualls and rain. Bar. 8 P.M. 30.1. 9. 30.0¾. 11. 30.0. 12½. 30.0 6 A.M. 29.9½. 8. 29.9½. 9½. 30.0½.
10	62¼	30.2½	30.2	62	30.1½	fr. h. h. dr. h. h. c. c.	N. N by W. N by W. N. N. N by E. N by E.		4		4	E 1.15	0.26						34. 6	34.15	2. 0			37.	39.	38.	38.6	Very unſteady.	136	Major part, freſh gales. Bar. 2½ P.M. 30.0½. 5. 30.0¾. 7. 30.1. 8. 30.1¼. 11½. 30.1¾. 6 A.M. 30.2. 9. 30.2 Two black alcatraſſes. A.M. a few pintado birds and ſom ſilver birds.
11	61¼	30.1½	30.0½	60¼	30.0	h. h. ſq. ſq. c. c. f.	N by E. N by E. NNE. NNE. NNE.		17		1	4. 5	E 2.25						34. 1	34.27	E 0.54	*12.43							140	Freſh gales, with ſqually weather and a large ſea. Bar. 9 P.M. 30.2. 11. 30.1½. 9 A.M. 30.1. 10. 30.0½. A.M. many pintado birds, ſheerwaters, &c. one alcatraſs.
12	60	30.1	30.0¼	59½	29.9¼	h. h. fr. fr. hr.	N by E. N by E. N. V. V.		10		25	6.17	5. 2						33.47	[34.36]	3.34			39.4	41.	40.2	41.	Unſteady.	110	Moſt part, freſh breezes and hazy. Bar. 1 to 10 P.M. 30.0¼ to 30.0½. 8 A.M. 30.0¼. 9. 30.0½. A.M. ſeveral poor Johns. ſome ſheerwaters, and a young alcatraſs, but no pintado birds.
13	58¾	30.2	30.1¼	59¼	30.0	r. c. c. fr. c. f. f. f. ſq, r. c.	N by W. NNW. NNW. NW. NW. NNW. NNW. NW by W. W by N. W.					8.43	7.26						33.37	34.13	6. 3	*16.9							122	Moſt part, freſh gales with ſome rain. Bar. 1 P.M. 30.0. 4. 30.0¼. 8. 30.0¼. 8 A.M. 30.0½. 9. 30.0¾. 11. 30.1½ Several poor Johns, ſheerwaters; and A.M. a few pintados.
14	58¾	30.3½	30.3¼	59	30.2½	f. c. c. c.	WSW. SW by W. SW by W. SSW. S by W. S by W. V. V. WSW. C.		16		16	10. 4	9. 3						33.44	34. 4	7.43	16.43*		41.4	43.2	42.3	43.1	Very ſteady.	67	Firſt part, freſh breezes. Latter, light airs. Bar. 8 PM. 30.1¾. 12. 30.2½. 9 A.M. 30.3¼. 12. 30.3¾. A.M. ſome porpoiſes.
15	60½	30.3	30.2¾	60½	30.1½	f. c. c. c. c.	V. NW by W. NW. NW. WNW. V. V. NNW.				32	11.10	10.41						33.49	34. 9	9.24			41.4	43.4	42 4	43 2	Extremely ſteady.	55	Firſt part, variable. Latter, an increaſing gale from NW. with cloudy weather. Bar. 9 P.M. 30.3¼. 11. 30.3.
16	60½	30.1½	30.1¼	60½	30.0¾	c. c. f. c. fr. c. ſq. c. fr. fr. c.	N by W. N by W. N by W. N by E. N by E.		2		9	13.32	13 12	94	11.38	4	☉	13	33.53	34.15	11.58	18.18*	17.52*	42.6	44.	43.3	44.	Very ſteady.	119	Moderate gales, with ſome light ſqualls and ſmooth water. Bar. 4 P.M. 30.2½. 6. 30.2. 10. 30.2¼. 12. 30.2. 8 A.M. 30.1½. 11. 30.1¼. A.M. ſome pintado birds, and ſeveral ſilver birds, ſome ſetting on the water, others flying about.
17	61	30.2	30.2	61	30.1	c. ſq. ſq, r. ſq, r. ſq, r. c. c.	N by W. V. NNW. NNW. NW by N. NW by N. V. NW by N.	8		19		16.29	15.50	75	14.35	1	☉	☽ alt. 5°	34. 1	34.15	14.39	19.39*	19.56*	43.4	45.2	44 3	45.	Not very ſteady.	146	Freſh gales throughout, with cloudy weather and ſome ſqualls. P.M. large black alcatraſs. A.M. ſome pintado birds, ſheerwaters, &c. Bar. 3 P.M. 30.1¼. 9. 30.1¼. 12. 30.1½. 7 A.M. 30.1½. 9. 30.1¾.
18	61	30.2½	30.2½	61	30.1½	f. f. c. c. h. h.	N by E. N by W. N by W. N by W. N. V. V.	4		9		19. 1	18.13						34. 5	34.15	17. 5	20.50* *22. 0	20.47*	45.6	46.4	46.1	46.6		126	Pleaſant breeze and moſtly hazy. Several pintado birds. A.M. two birds, ſomewhat larger than ſilver birds, with ſwallow-tails flying above the ſhip; alſo a Cape hen, and ſeveral grampuſſes. Bar. 9 P.M. 30.2½. 12. 30.2¼ 9A.M.30.2½
																													8365	

1775	T.	Marine Barometer				Weather and Winds.	D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor Long.	Magnetical							ML.	
																					Variation		South Dip						
		R.	S.	Th.	D.		N	S	W	E	A.	T.K.	D. ☾ T.K.	☾				A.	O.		Az.	Amp.	Face E.		MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.		'	'	'	'	° ' E	° ' E	'	° ' E				° ' S	° ' S	° ' E	° ' W	° ' W	°	°	°	°		8365	
Aug. 19	60¼	30.1	30.0	60½	30.0	h. N by E. WNW. NW by N. h. dr. NW by N. WNW. dr. fr. WNW. V. fr. V.	7			8	19.49	19. 9						34.19	34.22	18. 6			45.2	46.6	46.	46.5	Very ſteady.	44	Moſt part, light breezes and hazy. At 2 P.M. ſaw the land from maſt-head ESE. per compaſs. At 5½ h. Peaked hum of Cape Good Hope, S 52°.48' E Hum. miſtaken for Cape, S 57. E L. ext. Table Land, E 4. N L. ext. in ſight, E 19. N At Sun-riſe Sugar Loaf, N 69°. E Table Land, N 73. E Cape Good Hope, S 60. E At noon L. ext. N 55. E Cape Good Hope, S 61. E Longitude per T.K. 19°. 9' E Cape *Good Hope* per chart, 0.21 E Longitude of *Cape* per T.K. 19.30 True longitude of *Cape*, 18.27 Error of T.K. 1. 3
20	61	30.0½	30.0½	60½	29.9½	h. NNW. h. NNW. N. V. NE by N. h. N by E. N. NNE. h. N by E. NE.													34.15			22.31*	45.6	45.6	45.6	46.3	Perfectly ſteady.	70	Major part, moderate and hazy. In Falſe Bay. At 4 h. Cape Good Hope, E 16°. S. Sunſet * L. ext. N 21°. E. R 2.18 Bluff Point in one with Hummock. 72.30 Cape Good Hope * 2d. 86. 6 Hanglip. * 2d Cape Good Hope. L 24.30 Hummock, called *Cape* laſt night. 7. 0 Hummock. 1.50 Outer Hummock and higheſt part diſt. Ridge. R 13.48 Hanglip. Bellows, E 15°. S. Sunriſe, Hanglip, S 47°. E. Cape Good Hope, S 36°. W. White Sand Hills in Symmon's Bay, N 33°. W. At noon Hanglip Point, S 35°. E Cape Good Hope, S 50. W Noah's Ark, NW about 4' diſt. N. B. All theſe bearings are by compaſs, without allowing for variation.
21																							45.2	46.4	45.7	46.4	Very ſteady.	8479	At 4 P.M. being calm, hoiſted out the pinnace, and towed in towards the harbour. At 7 anchored in 20 fath. Noah's Ark W. Roman Rock NW ½ W diſt. about two miles.

Aug. 21	Strong gales and ſqually.	S. S by E.	At 4 A.M. found ſhip drove, veered to a whole cable; got down top-gallant yards, lowered fore and main yards, and got ſheet anchor overſide.
22	Freſh gales with hard ſqualls. P.M. increaſing.	S by E.	
23	Strong gales and exceſſive hard ſqualls. Towards midnight began to moderate.		At 8, gale increaſing, ſwayed up lower yards. At noon, cloſe reefed top-ſails, ſtopt the cable, and came to ſail.
24	Moderate and fair.	SE.	At 1 P.M. anchored in Symmon's Bay, in 7½ fath. when moored, lower flag ſtaff from Point WSW. Dolphin's Noſe NE. Roman Rocks E½S. Noah's Ark SE. Hanglip SE¼S off ſhore ¾ of a mile.
25	Moderate and cloudy.	NW.	
26	Freſh breezes, with ſome rain.	W. SW.	
27	Light breezes moſtly from SE. with fair weather.	SE.	
28	Light breezes and fair.	V.	Sailed a Dutch ſnow.
29	Firſt and middle, moderate and cloudy, with ſome rain. Latter, ſqually.	NW to W. SW.	Sailed La Bretagne, Capt. MANSON for Mauritius.
30	Strong gales and clear weather.	SSE.	Returned.
Sept. 1	Moderate and fair for moſt part, and a ſwell.	SE.	
2	Strong gales and hard ſqualls.	NW.	
3	Major part, ſqually with rain. Towards evening, light breezes and fair.	NW.	Sailed again.
4	Moderate and fair.	V.	
5	Strong gales and very hard ſqualls; could not ſend a boat aſhore.	S by E.	
6	Moderate and fair.	V.	
7	Moſtly light breezes. P.M. a freſh gale.	V. Wy.	Sent long-boat to endeavour taking up the anchor: returned with 80 fathoms of cable, but could not weigh the anchor.
8	Moderate breezes.	SW.	
9	Moderate and fair.	V.	
10	Strong gales and hard ſqualls.	S by E.	
11	Light winds from Southward, and fair weather.	Sy.	
12	Fair.	V.	
13	Fair.	V.	
14	Light airs and	C.	Sailed the Anſon, Capt. TRYON, for England.
15	First part, calm. Latter part, breezes.	C. Wy.	Sent long-boat again to try for the anchor, but could not purchaſe it.
16	Fair.	V.	
17	Strong gales, with rainy weather.	NW.	
18	Freſh gales.	NW.	

1775	Th.	Marine Barometer				Weather and Winds.	D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E D.	Latitude		Cor. Long.	Magnetical							ML.	*Cape* of GOOD HOPE lat. 34.22 S. long. 18.27 E.
		R.	S.	1 h.	D.		N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Variation. Az.	Variation. Amp.	South Dip Face E.	South Dip Face W.	South Dip MD.	South Dip C.D.			
		In.Dec.	In.Dec	°	In.Dec.		′	′	′	′	° ′ E	° ′ E	′	° ′			′	° ′ S	° ′ S	° ′ E	° ′ W	′ ° W	°	°	°	°			
Sept. 19	59		30.1	59		f. NW. NW by W. c. f. NW by W. WNW. f. C. c. C. E. C. WNW. NW.					18.43	18.52							34.48	18.52								17	At Sun-ſet, Cape Good Hope NW=WNW. Table Land N by W=NW by N. Hanglip E 7 N=E 29½ N. Eaſtern ext. in ſight E 5° S=E 17½ N diſtance 6 leagues from neareſt land. At Sun-riſe, Cape Good Hope N by W½W=NW½N 9 or 10 leagues. Hanglip Point NE=NNE. Ext. to E^{d}. ESE=E. Saw a ſail, ſuppoſed the Gatton, come round from Table Bay, to join us. At noon, Cape Good Hope N per comp. =N 22½ W. Hanglip N 35 E=N 12½ E 9 leagues. Eaſtern ext. N 80 E=N 57½ E. Major part, light breezes and fair weather, with great ſwell from SW.
20	59¼		30.0¾	59		c. NW. NW by N. c. ſq. NW by N. N by W. ſq. c. N by W. NNW. c. ſq. ſq, r. NNW.	4		49		21.26							35.59	35.55	[21.15]								154	Freſh gale, with a very large ſea. Bar. 9 P.M. 30.1. 8 A.M. 30.1.
21	57½		30.1½	57¾		c. NW by W. WNW. W by S. c. ſq. c. W by S. W. c. W. W by S. c. ſq. ſq, r. W by S.	8				24.22							36.21	36. 9	[24. 1]								144	Freſh gales and great ſwell. Bar. 8 P.M. 30.1. 8 A.M. 30.1.
22	62		30.2½	62		ſq. W by S. SW. c. f. S by W. S. f. c. S. C. V. c. f. NE. NE by E. ENE.	10				25.36							36.37	36.15	[25. 5]								66	Firſt part, decreaſing gale. Middle, calm. Latter part, a breeze from the NE. Great ſwell. A.M. bar. 30.3. N.B. it was not obſerved at noon. Paſt 1 P.M. it was 30.2½ Many alcatraſſes, pettrils, pintado birds, &c.
23	66½		29.6¾	66		f. NE by E. ENE. f. NE by E. f. NE by E. f. ENE. NE by E.	6				27. 8							37.34	37. 6	[26.27]								92	Firſt part, freſh gales. Latter, hard gales, with great and confuſed ſea, Moſtly fair weather. 2 P.M. bar. 30.2½. 9. 30.1. 11. 30.0. 8½ A.M. 29.8. Many pettrils, pintado birds, &c.
24	65		29.5½	65		h. NE by E. h. NE by E. NE by N. V. h. c. V. W. c. W. WNW. NW by W.		9			28.13	27.23						37.58	37.39	27.23								58	Firſt part, hard gales from N^{d}. Latter, from W^{d}. with a very large NE ſwell, confuſed in heaps. Many alcatraſſes, pettrils, pintado birds, &c. Bar. 29.6 to 29.5½.
25	58½		29.7	58½		c. W by N. V. W by N. c. h. c. r. c. W by N. WNW. V. NW. c. r. NW. V. r. ſq. WSW.	15			31	29.35							37.32	36.58	[29. 0]								69	Firſt part, light breezes. Latter part, freſh breezes. A.M. ſwell much abated. Many alcatraſſes, pintado birds, pettrils, &c. Bar. 2 P.M. 29.5¾. 3. 29.6. 12. 29.6. 8 A.M. 29.6½. 9. 29.6¾.
26	61	29.9½	29.9	61	29.8½	ſq. WSW. ſq. ſq, ſr. ſq. WSW. SW by W. c. r. SW by W. W by S. W by N. r. W by N. WNW.	21				32. 9	31.50						37. 1	36. 6	31.50			52.4	53.4	53.	53.4	Not very ſteady.	127	Strong gales, moſtly W^{d}. with ſqualls and ſome rain. Many alcatraſſes, pintado birds, &c. and great many pettrils. Bar. 2 P.M. 29.6½. 4. 29.7. 6. 29.8. 9. 29.8½. 8 A.M. 29.9. 9. 29.9¼. 11. 29.9¼.
27	62½	30.1½	30.1¼	62½	30.0¾	c. N by W. c. ſq, r. N by W. NNW. ſq, r. h. NNW. W by N. ſq. c. W by N. W. WNW.	1				35.18							36.40	35.24	[34.55]								158 885	Firſt part, freſh gales and ſqualls. Latter, moderate. A great ſwell. Many alcatraſſes, pintado birds, pettrils, &c. Bar. 4 P.M. 29.8½. 6. 29.9. 9. 29.9. 12. 29.9. 8 A.M. 30.1. 9. 30.1¼. 11. 30.1¼.

1775	Th.	Marine Barometer,				Weather and Winds.		D.L A.O.		D.L. A. T.K		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	G denotes *Capt. Money's* Obſervations in the *Gatton*, the longitude reduced to *noon*.
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Variation		South Dip						
																						Az.	Amp.	Face E.	Face W	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		885	
												E	E	E	E				S	S	E	W	W							
Sept. 28	62¾	30.3	30.2¾	62½	30.2	h. ſq, r. r. r. h. h. h.	W by N. W. W by N. W by N. NW by W. V. NW by W.		1	9		36.54	36.26						36. 3	34.49	36.26		27.30*	57.4	58.4	58.	58.4	Very unſteady.	86	Pleaſant breeze. Many alcatraſſes, pintado birds, pettrils, &c. Bar. 3 P.M. 30.1½. 6. 30.2. 10. 30.2½. 12. 30.2½. 8 A.M. 30.2¾.
29	67¼	29 9½	29.9¼	67	29.9	f. f. ſq. h. ſq. c. c.	NW by N. N by W. N by W. V. N by E. N by E. N. N. N by E.	4			27	39.48	39 47						35.49	34.31	39.47	27.43*							144	Major part, freſh gales. Many alcatraſſes, pintado birds, pettrils, &c. Gatton, var. az. 28° 13′* W. Bar. 1 P.M. 30.2¼. 5. 30.1¾. 9. 30.1. 12. 30.0½. 6 A.M. 29.9¾. 8. 29.9½. 10. 29.9½.
30	56½	30.2	30.1¾	56½	30.1¼	c. hſq, r, L, Th. L. tosw. c. c. ſq, r. ſq, r. h. c.	N by E. N. V. V. W. W by S. W by S. SW by W. SW.	20			6	42.52	42.57						35.34	33.56	42.57								153	Firſt and middle, freſh gales, with hard ſqualls, thunder, lightning, and rain. Latter, blowing freſh and hazy weather. Many pettrils, pintado birds, &c. and A.M. one ſilver bird. Bar. 2 P.M. 29.8¾. 4½. 29.8½. 5¾. 29.7½. 6. 29.7¾. 8½. 29.8½. 9¾. 29.9. 11. 29.3.
Oct. 1	61¼	30.3¼	30.3	61	30.2½	h. c. c. c. c.	WSW. S by W. S. S. SSE. S by E. SE. SE by E. SE by S. SE. C. E.	19			12	43.59							35.22	33 25	[44.10]								64	Firſt part, freſh gales. Latter, light breezes and calm. A.M. many alcatraſſes, &c. Bar. 2½ P.M. 30.2. 5. 30.2. 9. 30.3. 12. 30.3. 6 A.M. 30.3½. 8. 30.3¼. 11¼. 30.3.
2	65½	30.1¾	30.1¾	65	30.1	c. ſr. ſr. c. ſq. h. h. h.	E by S. E. V. V. ESE. E. ENE. NE. NE. NE by N.					45.24	45.41	9 59W	45.32 46.40	6 3	⊙ *An.	26 21	35.55	33.58	45.41					59or60		Extremely unſteady.	85	Firſt part, light breeze. Latter, freſh. P.M. many alcatraſſes, &c. G long. ⊙ and ☾, 45° 31′ E. Bar. 5½. P.M. 30.3. 8. 30.3. 12. 30.2. 8 A.M. 30.1½.
3	67¼	30.3	30.2¾	67	30.2	f. f. h. f. f. ſq. h. h. f.	NE. NE. NE. NE. NE by E.		2		3	47.36	47.56	32E	47.24	5	⊙	38	36. 6	34.11	47.56	26.49*		59.	60.	59 4	60.	Very unſteady.	110	Moderate breezes throughout, weather changeable. Few birds, great dews, and water remarkably ſmooth. G var. 4 az. 26° 46′*, amp. 26° 47′*. Bar. 2 P.M. 30.1½. 6. 30.1¾. 12. 30.2¼. 8 A.M. 30.2½. 9¼. 30.3.
4	66½	30.3¼	30.2¾	66	30.2½	h. h. h. h.	NE by E. NE. NNE. NNE.		2		6	50.15	50.41	34W	51.15	3	⊙	26	36.13	34.20	50.41							*Larboard-ſide of cabbin.*	132	Moſtly freſh gales. Some pintado birds. A.M. great dews; water ſmooth. G long. ⊙ and ☾ 50° 39′ E. Bar. 1½ P.M. 30.2½. 4. 30.2¼. 7¾. 30.2. 12. 30.2. 6 A.M. 30.2¾. 9. 30.3.
5	67	30.2½	30.2¼	67	30 1¾	h. h. h. ſq. c. c.	NE by N. NE by N. NE by N. N. N.	2			1	53. 8	53.35						36.11	34.16	53.35	25.57*	25.39*						143	Freſh breezes. Some pintado birds. A.M. one pettril. G var. 4 az. 26° 9′*, amp. 26° 7′*. Bar. 2 P.M. 30.2¼. 6. 30.2¼. 6 A.M. 30.1¾. 8. 30.2. 9½. 30.2¼.
6	62¼	30.2	30.1¾	62	30.1¼	h. h. h. h. c.	N by W. N by W. NNW. NNW. NW. NW .WNW. NW. V. S by E. SSE.	12			20	55.14	56. 1						36. 4	33.57	56. 1	24.42*		59.4	61.	60.2	60.6	Very ſteady.	106	Firſt part, freſh gales. Latter, light and variable. P.M. an alcatraſs. A.M. ſeveral alcatraſſes and pintado birds. G var. 2 az. 24° 42′*. Bar. 1¾ P.M. 30.2. 4. 30.1¾. 6. 30.1½. 10. 30. ¾. 12. 30.1¼. 8 A.M. 30 1¾. 9. 30.2.
7	62½	30.3¾	30.3¾	62	30.2½	c. ſq. r. r. h. h. f. f.	SE by E. V. SSE. ESE. SE by S. S by E. S. S by W. S by W. V.	17			13	56.11	57.11	26E	56.45	4	*At.	23	35.49	33.25	57.11								53	Firſt and middle, light breezes and rain. Latter, light breezes and fair weather. P.M. *a turtle paſſed*; ſeveral alcatraſſes and other birds. Bar. 2½ P.M. 30.1¾. 5. 30.1¾. 6. 30.2. 9½. 30.2½. 12. 30.2½. 8 A.M. 30.2¾.
																													1961	

1775	Th.	Marine Barometer.				Weather and Winds.		D.L. A.O.		D.L. A.T.K.		Longitude from Greenwich				S.	O.	E.D.	Latitude		Cor. Long.	Magnetical Variation.		Magnetical South Dip Face		MD.	C.D.		ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Az.	Amp.	E.	W.					
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ E	° ′ E	′ E	° ′ E			′	° ′ S	° ′ S	° ′ E	° ′ W	′ ° W	°	°	°	°			
Oct. 8	61½	30.3½	30.3	61	30.2½	c. c. f. f.	SW. V. C. V. V. W. V. NW by W.		2		23	56.32	57.55						35.50	33.28	57.55	23.48*	24. 2*	61. 61.4	63. 62.	62. 61.6	62.4 62.2	Pretty ſteady. *Larboard-ſide of cabbin.* Ditto. *Starboard-ſide of cabbin.*	1961 21	Moſtly light airs and calms, with large ſwell from SW. Few birds. G var. 3 az. 23° 32′*, amp. 23°50′*. Bar. 6 P.M. 30.3½. 8 A.M. 30.3¼. 10. 30.3¼.
9	63½	30.4¼	30.3¾	63	30 3¼	f. f. f. f. h.	NW by W. WNW. W by N. W by N. WSW. WSW. SW by W. SW by W. V.	13			12	58.18	59.53	4	59.49	5	A *	32	36. 5	33.30	59.53	23.49*	23.57*	61.4	62.2	61.7	62.3	Very ſteady.	89	Major part, pleaſant breezes and fair weather. Juſt before noon a *ſeal* paſſed cloſe to the ſhip on the larboard ſide, at ſame time a flock of a vaſt number of *ſmall white birds* at ſome diſtance on ſtarboard quarter. G var. 2 az. 23° 25′*. Bar 2½ P.M. 30.3. 7. 30.2¾. 1 A.M. 30.3¼. 9. 30.3½.
10	61½	30.4½	30.4	61¼	30.3½	h. f. f. f. f.	S by W. S by E. SSE. V. SE by S. S by E. S by E. C. WNW. NW. WNW.	5			1	58.46	60.22	45	59.37	6	A *	28	36. 0	33.20	60.22	21.43*	21.52*	61.4	62.4	62.	62.4	Pretty ſteady.	24	Moſtly light airs, with a large ſwell from W^d. P.M. a *grampus* very near the ſhip. Several alcatraſſes, &c. G var. az. 22°19′*, amp. 22°23′*.
11	62½	30 3¼	30.2¾	62¼	30.2½	f. f. c. c. c. f.	NW by W. NW by W. NW by W. WNW. WNW.	6			27	60.18	62.21						36. 6	33.20	62.21	23.10*	22.47*	61.4	62.4	62.	62.4	Not very ſteady.	77	Pleaſant breezes. Some pintado birds, &c. ſmooth water, but a long ſwell from SW. G var. az. 22° 30′*, amp. 22° 45′*.
12	64¼	30.3¼	30.3	64	30.2½	f. f. f. h. c. c.	WNW. WNW. WNW. WNW.	4			12	61.39	63.54						36.10	33.20	63.54	21. 5*	20.51*	62.2	63.2	62.6	63.2	Very ſteady.	68	Firſt part, pleaſant breezes. Latter, light airs, with great ſwell from SW. Some pintado birds, &c. Bar. 2 P.M. 30.2¾. 11½. 30.2¾. 8½ A.M. 30.3.
13	65¼	30.2¼	30.1¼	65	30.1¼	h. h. h. c. c. ſq. c.	NW by N. NNE. NNE. N by E. N by E. N by E.		2		10	63.34	65.59						36.14	33.26	65.59	20.27*	20.34*	62.4	63.2	62.7	63.3	Not very ſteady.	96	Firſt part, light breezes. Latter, moderate. Several pintado birds. A.M. a ſilver bird and pettril, ſeveral poor Johns. G var. 3 az. 21° 28′*, amp. 20° 59′*. Bar. 2 P.M. 30.2¾. 10½. 30.2¾. 1 A.M. 30.2¼.
14	66	30.3	30.2½	65½	30.2	h. h. h. h.	N by E. N by E. NNE. NNE. NNE. NE by N.	2			21	65. 6	67.52	W 25	68.17	5	☉	27	36. 4	33.14	67.52	19.35*		61.6	62.4	62.1	62.5	Pretty ſteady.	78	Pleaſant breeze. Great dews. G long. ☉ and ☽ 67° 56′. Bar. 6 P.M. 30.2. 11. 30.2¼. 12. 30.2½. 8 A.M. 30.2½.
15	64¾	30.0	29.9½	63½	29.8½	f. f. ſq. ſq. h. h. ſq.	NNE. NE. NE. NE. NE by N. NNE. NNE.		24		24	67.26							35.55	[33.17]	[70.24]	18.43*							117	Firſt part, moderate. Latter, freſh gales and ſqually. Very damp weather. G var. 2 az. 19° 23′*, amp. 19° 43′. Bar. 6 P.M. 30.2. 12. 30.1¼. 9 A.M. 29.9½.
16	59	30.3	30.2½	59	30.2	ſq, r. r. h. h. h. c. c.	NNE. V. N. N. NNW. NW. NW. W by S. SW by S. SW by S. S by W.					69.34	72.44	E 35	72. 9	2	☉	19	35. 4	32.38	72.44			61.4	62.2	61.7	62.3	Not ſteady.	120	Freſh gales, with ſqually weather. A.M. many pintado birds, ſome alcatraſſes, &c. Bar. 2 P.M. 29.8½. 4. 29.8¼. 6. 29.7¾. 10. 29.8½. 12. 29.9. 7½ A.M. 30.1½. 9. 30.2 10. 30.2.
17	62¼	30.4¼	30.4¼	62¼	30.2½	c. c. c. c.	SSE. SSE. SE by S. SE by S. ESE. V. V. C.	11		5		70.30	73.35						34.57	31.41	73.35								66 2717	Firſt part, moderate. Latter, light airs inclinable to calm, with a great ſwell. Several pintado birds, ſome alcatraſſes, &c. At night, water luminous like blubbers. Bar. 2 P.M. 30.2¾. 4½. 30.3. 6. 30.3. 10. 30.3½. 12. 30.4. 8 A.M. 30.4. 9. 30.4½. 10. 30.4½.

1775	Th.	Marine Barometer.				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E. D.	Latitude		Cor. Long.	Magnetical							ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D. ☽ T.K.	☽				A.	O.		Variation		South Dip						
																						Az.	Amp.	Face E.	Face W	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		2717	
Oct.												E	E		E				S	S	E	W	W							
18	63¼	30.4¼	30.4	63	30.3¼	f. c. c. c. h. c. c.	V. C. C. E by N. V. NE. V. NE by E. NE. V. V. N by E.			6		70.32	73.31						34.53	31.37	73.31			61.	62.	61.4	62.	Pretty ſteady.	33	Moſtly light airs and calm, witha large ſwell. At night, ſea luminous like blubbers. Several alcatraſſes, &c. loſt ſight of Gatton; got ſight of her again before noon. Bar. 2 P.M. 30.4. 5½. 30.4. 11. 30.4. 1 A.M. 30.4. 8. 30.4¼. 10. 30.4¼.
19	66½	30.4	30.4	66½	30.3	h. c. c. c. c.	NNE. N. N by E. NE. NNE. N by E. NNE. NE. NE. NE by N. NNE. NE by N. N by E.		5		10	71.18	74.27						34.52	31.41	74.27			60.6	61.6	61.2	61.6	Very ſteady.	40	Light airs. Sea luminous at night like blubber. P.M. an uncommon bird like Cape hen, ſome alcatraſſes. Bar. 2 P.M. 30.4. 4. 30.4. 10. 30.4. 12½. 30.4. 7½ A.M. 30.3¾. 8½. 30.4. 10. 30.4¼.
20	65		30.3	64¼		f. f. f. f.	NE by N. NE by N. N by E. N. NNE. NNE. N by E. N.		1		8	72.21	75.38	3W 64E 60E	75 41 74 34 74 38	4 4 4	⊙ ⊙ ⊙	37 51 35	34.49	31.39	75.38	14. 9*	14.48*						55	Pleaſant breezes. Sea luminous at night like blubbers. A.M. ſky mare's tails. No birds. G var. 4 az. 15° 24′*. amp. 15° 2*. Long. ⊙and☽ 75° 56′. Bar. 2½ P.M. 30.3¾. 11. 30.3¾. 1 A.M. 30.3¾. 8. 30.3½.
21	63¼	30.2½	30.2	64¼	30.1¼	f. f. c. c. ſq. c. c. ſq, r.	N. N by W. N by W. NNW. NW by N. NW by N. NW. V. SW by S.	10			22	73.16	76.55						33.45	30.25	76.55			59.4	60.4	60.	60.4	Very ſteady.	84	Moderate breezes. Sea luminous at night like blubbers. Towards evening became cloudy. No birds. G var. 2 az. 14° 10′*. Bar. 2 P.M. 30.3. 6. 30.2½. 8. 30.2½. 10¾. 30.2¾. 12. 30.2½. 8 A.M. 30.2. 9. 30.1¾. 10. 30.2. 11. 30.2½.
22	61¾	30.4	30.3½	61½	30.3	f. f. c. c.	SSW. SSW. S by E. SSE. SSE. SE.	7		15		74.46	78.10						31.47	28.20	78.10	12.44*	12.49*	58.	58.6	58.3	58.7	Not ſteady.	142	Freſh gales. A.M. one or two poor Johns. No other birds. G var. 2 az. 12° 31′*, amp. 12° 51′*. Bar. 2 P.M. 30.2. 4. 30.1¾. 5½. 30.2. 6½. 30.2¼. 10½. 30.2¾. 12. 30.2¾. 9 A.M. 30.3½.
23	66	30.3¾	30.3¼	66	30.3	c. c. c. ſq. ſq. c.	SE by E. ESE. E. E. V. E by N. E by N.	21		4		75. 9	78.29						29.55	26.28	78.29			56.4	57.2	56.7	57.3	Very ſteady.	97	Major part, moderate breezes. P.M. ſeveral poor Johns, though ſlenderer and ſmaller than uſual. A.M. poor Johns, a pettril, and a ſheerwater. Bar. 2 P.M. 30.3. 6½. 30.3¼. 12. 30.3½. 8½. 30.3¾. 9. 30.3¾. 10. 30.3¾.
24	71	30.3¾	30.3	71	30.2½	f. f. f. f.	NE by E. NE by E. NE. NE. NE by E. NE by E. V.		3	24		74.43	77.39						29. 4	25.37	77.39	7.53* * 10.10	8. 1*	56.2	56.6	56.4	57.		59	Firſt part, pleaſant breeze. Latter, light air and variable. P.M. an alcatraſs. A.M. an alcatraſs. G var. 2 az. 8° 54′*, amp. 9° 9′*. Bar. 2 P.M. 30.3. 4. 30.2½. 6. 30.3. 7½. 30.3. 11. 30.3.
25	71¼	30.3¾	30.3¼	70½	30.2½	f. f. f. c. c. f.	NE by N. C. ENE. E by S, C. C. C. SW by S. C.		5		2	74.47	77.45						29. 6	25.44	77.45	10. 3* *9.20	*9. 8	56.2	57.	56 5	57.1	Extremely unſteady.	7	Moſtly calm. Some birds at diſtance. G var. az. 8° 38′*. Bar. 2 P.M. 30.3. 8. 30.3. 10. 30.3¼. 8 A.M. 30.3. 8½. 30.3¼. 9. 30.3½.
26	70¼	30.3¾	30.3	70¼	30.3	h. ſq, r. ſq, r. ſq. c. r. r. ſq, r. ſq. ſq, r.	S by W. S by E. SE. SE. ESE. ESE. V.	8		1		75.43	78.40						27.17	23.47	78.40								120	Freſh gales, with ſqualls and rain; ſometimes ſqualls very hard. Great irregular ſwell. Several birds, chiefly poor Johns or black ſheerwaters, being of the colour of the former, and ſhape like the latter, but without white breaſts. Bar. 2 P.M. 30.3. 5. 30.2¾. 6. 30.2¾. 8. 30.3. 12. 30.2¾. 9 A.M. 30.3.
27	71	30.3	30.2½	70¾	30.2	ſq, r. ſq. ſq. ſq, r. ſq, r. ſq, r. ſq.	V. E. E by S. E by S. E by N. E. E by N. E by N. E.	37		4		75.41	78.34						25.49	21.42	78.34								89	Freſh gales and ſqually. Several ſheerwaters, or birds like them, of different colours, grey, brown, and blackiſh; ſome white breaſted and white under the wings. Bar. very unſteady theſe two days from ſhip's motion. Great irregular ſea. Bar. 2 P.M. 30.2¾. 2½. 30.3. 4. 30.2½. 6. 30.2½. 10. 30.3. 12. 30.3. 8 A.M. 30.2½. 9. 30.2½. 10. 30.2½.
																													3443	

Journal of a Voyage to The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

1775		Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A.T.K.		Longitude from Greenwich							Latitude		Cor. Long.	Magnetical							ML.	
																						Variation		South Dip						
		R.	S.	Th.	D.			N	S	W	E	A.	T.K.	D. ☾ T.K.	☾	S.	O.	E. D.	A.	O.		Az.	Amp.	Face E.	Face W.	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ E	° ′ E	′ E	° ′ E				° ′ S	° ′ S	° ′ E	° ′ W	° ′ W	°	°	°	°		3443	
Oct. 28	72	30.2½	30.2	72	30.1½	ſq. ſq, r. ſq. ſq. c. ſq. ſq. h.	E. E by S. E by S. ESE. E by S. E by S. ESE.	16			8	76. 9	79.10						24.17	19.54	79. 4								96	Moſtly freſh gales from Eaſtward, with ſqualls and rain and a large ſwell. Several birds as before. A.M. many flying fiſh. Bar. very unſteady, 1 P.M. 30.2½. 4. 30.1½. 5¼. 30.2. 6. 30.2. 8. 30.2¼. 10. 30.2½. 12. 30.2½. 9 A.M. 30.2½.
29	73	30.2½	30.2	73¾	30.1½	c. c. c. ſq. h. h. f.	ESE. E by S. ESE. E by S. ESE. E by S. E by S. ESE. E by S.		2	8		76.52	79.45	35 56	79.10 78.49	4 4	⊙ ⊙	27 10	22.54	18.33	79.33								93	Freſh gales, with ſome ſqualls. Several birds as before. P.M. a large white bird which flapped its wings and flew high, unlike the birds which are found in the main ſea. G long. ⊙ and ☾ 77° 39′ E. Bar, 2 P.M. 30.1¾. 4. 30.1½. 6. 30.1½. 10. 30.2. 11½. 30.2. 8 A.M. 30.2¼. 9. 30.2¼. 10. 30.2½.
30	75	30.2	30.1½	74½	30.1	f. ſq. ſq. c. c. c.	ESE. E by S. ESE. E by S. E by S. E by S.	5		15		77.39	80.17						21.11	16.45	79.59		4. 4*	46.2	47.2	46.6	47.3	Unſteady.	113	Strong gales, with frequent ſqualls. Some birds as before. Vaſt flocks of flying fiſh. Swell abated. Bar. 2 P.M. 30.2. 3. 30.1¾. 4. 30.1½. 10½. 30.2. 12½. 30.2. 8 A.M. 30.1½. 9. 30.1½.
31	77	30.1	30.0½	77	30.0	h. h. ſq. ſq, r. ſq. ſq.	ESE. E by S. E by S. E by S. E. E. E by N.		3		3	78.10	80.51						19. 8	14.45	80.27	*3.17		44.	45.	44.4	45.1	Ditto.	127	Squally. Few birds as before. Swell increaſed and weather unſettled. G long. ⊙ and ☽ 79° 8′ E. Bar. 2 P.M. 30.1. 4. 30.1. 6. 30.0¾. 10. 30.1. 12½. 30.1. 6 A.M. 30.0½. 8. 30.0¾. 9. 30.0¾. 10½. 30.0½.
Nov. 1	78	30.1	30.0¼	78½	30.0	h. ſq, r. ſq, r. h. h. ſq, hr. ſq. c.	E. VE. E. E. VEy. VEy.	1			1	78.17	80.59						17.15	12.51	80.29			41.	42.	41.4	42.1	Very ſteady.	114	Squally. P.M. a tropic bird, which reſembles a paroquet in ſhape, but is of a whitiſh grey. Swell much abated. G long. ⊙ and ☾ 79° 10′ E. Bar. 2 P.M. 29.9¾. 4. 30.0. 6. 30.0. 9½. 30.0¼. 12½. 30.0. 9 A.M. 30.0¼.
2	81	30.0¾	30.0¼	81	30.0	h. h. h. h. f.	E by N. E by S. E by N. V. E. E by N. E by N. E.			10		78.26	80.58	114 108	79. 4 79.10	8 6	⊙ ⊙	42 30	15.44	11.20	80.22	1.20* *1.12	*1.42	38.6	39.4	39.1	39.7	Unſteady.	92	Moderate breezes, with ſome ſqualls. A.M. few birds; the grey white under wings; frequently overcaſt. A.M. a little more ſwell from Northward. G var. 2° 3′*, amp. 2° 4′*. Bar. 2½ P.M. 29.9¾. 6. 30.0. 12½. 30.0¼. 8 A.M. 30.0¾. 9½. 30.0¾. 11½. 30.0½.
3	81	30.0½	30.0	80¾	29.9½	f. c. c. c. f. f.	E. E. E. E.	5		9		79. 5	81.28						13.47	9.18	80.46	0.59*		35 4	36.4	36.	36.6	Not ſteady.	123	Pleaſant gale, with fair weather. A.M. a bird, larger than a tropic bird, with black wings and white body at a diſtance, it flapped the wings very much. A head ſwell. G var. az. 1° 0′*, 0° 52′*. Bar. 2 P.M. 30.0¼. 6. 30.0¼. 7½ A.M. 30.0½.
4	82	30.0½	29.9¾	82	29.9¼	f. c. c. f. f. f.	E. E by S. E. E. E. E.	5		13		79.36	81.46	82 41	80.24 81. 5	6 6	*At. A*	17 28	11.57	7.23	80.58	0. 3*		32.6	33.6	33.2	34.		114	Major part moderate. P.M. ſome *Southern lights*, very rare and motionleſs. Bar. 2½ P.M. 29.9½. 6. 29.9¾. 8. 30.0.
5	82	30.0	29.9½	81½	29.9	h. h. h. f. f.	E. E. E. V. E. E.	7		18		80.19	82.11						10. 5	5.26	81.17	*0. 8		29.2	29.6	29.4	30 3	Extremely ſteady.	119	Freſh gales, with fair weather. P.M. a large bird of the booby kind above the ſhip; it had a long neck, and was ſomething in ſhape and ſize like a wild gooſe. At night, *Southern lights*, ſome diverging in rays downwards, ſome like a rare cloud, very little motion; a faint ring round ☾. A.M. four tropic birds. G var. 4 az. 0° 21′ *E. az. *0° 4′ E. Bar. 2½ P.M. 29.9½. 6. 29.9¼. 1 A.M. 29.9. 8. 29.9½.
																													4434	

1775	Th.	Marine Barometer.				Weather and Winds.		D.L. A.O.		D.L. A.T.K		Longitude from Greenwich				S.	O.	E D.	Latitude		Cor. Long.	Magnetical							M L.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D. T.K.	☽				A.	O.		Variation. Az.	Variation. Amp.	South Dip Face E.	South Dip Face W.	South Dip MD.	South Dip C.D.			
	°	In.Dec.	In.Dec	°	In.Dec.			'	'	'	'	° ' E	° ' E	' E	° ' E				° ' S	° ' S	° ' E·	° ' E	' ° E	°	°	°	°		4434	
Nov. 6	2¾	30.0¼	29.9¾	82¼	29.9¼	c. c. c. c.	E. E. E. E by N. E. E by N. E.	1		18		80.48	82.22	75	81. 7	5	*F	37	8.24	3.44	81.22	*0. 8		26.2	26.6	26.4	27.3	Very ſteady.	101	Moderate breezes. *Northern lights* to Northward. Little motion, but great extent, and afterwards *Southern lights.* G var. amp. 0° 48' *E. Bar. 2 P.M. 29.9¼. 1 A.M. 29.9½. 9. 30.0.
7	83	30.0	29.9½	82½	29.9	h. h. h. c.	E. E by S. E. E by S. ESE. SE by E.	9		31		81.46	82.49						6.19	2.30	81.43	1.12*	1. 6*	24.4	25.	24.6	25.5	Not ſteady, ſhip laying to for boat.	89	Moderate breezes. G var. az. 0° 45' *E, amp. 0° 13' *E. Bar. 2 P.M. 30.0. 6. 29.9½. 1 A.M. 29.9¼. 8. 29.9½.
8	83¼	30.0¼	29 9¼	82½	29.9¼	h. h. h. ſq. f.	SE by E. E by N. ENE. E. E. E by S. E by S.	17		20		82.12	82.55						5.17	1.11	81.43			22.	22.2	22.1	23.	Extremely ſteady.	69	Major part, moderate breezes. A.M. came on board from the *Gatton* Major SEARS and Capt. ALCOCK for Madraſs, Mr. HORSLEY went aboard that ſhip for Bombay. Bar. 2 P.M. 29.9. 12. 29.9¼. 9 A.M. 29.9¾.
9	83¾	29.9¾	29.9	83¼	29.8½	f. f. f. hr. dr. c.	V. E. E by N. E. E. E by N. V. E.		14	53		82.31	82.21						4.20	0.18	81. 3			20.	20 4	20.2	21.1	Very ſteady.	61	Variable winds, with rain at times. Bar. 4 P.M. 29.8¾. 9 A.M. 29.7¾.
10	81¾	29.9¾	29 9	81¼	29.9¾	c. c. r. c. c. c. ſq.	E by S. E. E by S. V. V. E by N. E by S. E by S. SE by E. SE. SE by E.	3		45		83.19	82.24						3.18	N 0.47	81. 0	0.52*		19.4	19.	19.4	20.1	Not very ſteady.	81	Moſtly freſh breezes. At 10½ A.M. there was to the SE. the appearance of ſomething black like *a rock*, and at the ſame time like *a ſhoal*; but it being to windward, and ſhip having freſh way, could not determine whether it was *a ſhoal* or the reflection of the Sun behind the clouds. This is nearly the ſituation of the *Ouro.* A man ſent to maſt-head could not ſee any thing. Bar. 2 P.M. 29.8½. 9. 29.8¾. 12. 29.8¾. 8 A.M. 29.9½.
11	83¾	29.9¾	29 9	83½	29.8¾	h. c. c. c. ſq, hr. c.	SE by E. E by S. ESE. E by S. E by S. E. E by S. ESE. V.	9		33		84. 5	82.37						2. 3	2. 1	81. 7			15 4	15 6	15.5	16.4		82	Moſt part the wind Eaſterly, with ſome ſqualls towards the latter end. Bar. 1 A.M. 29.9. 8. 29.9¼.
12	80¾	29.9½	29.9	80¼	29.8½	ſq. r. r. L. to nw. f. c. ſq, r. L. to e. ſq. r.	V. V. V. E by N. V. NE. V.			32		84.25	82.25						1.12	2.52	80.49			15.4	16.	15.6	16.5	Pretty ſteady, but ſhip not having ſteerage-way.	61	Winds variable with unſettled weather. P.M. a bird like a land bird. A.M. many yellow tails; two black birds at a diſtance like land birds: a white bird with black wings, like a gull. Bar. 2 P.M. 29.8½. 4. 29.8. 9. 29.9. 12. 29.9. 8 A.M. 29.9¼. 10½. 29.9½. 11. 29.8¾.
13	82	29 9½	29.8¾	82	29.8½	c. r. c. c. hr. c. L. to s. c. c. ſq, r. c.	C. V. C. C. C. C. V. NW. V.	2		19		84 33	82.14	95	80.39	3	⊙	28	1.12	2.54	80.32			14.4	15.4	15.	15.7	Very ſteady.	8	Light airs and calms, with hard rain. Many fiſh, porpoiſes, &c. A.M. a mottled grey bird of the booby kind. The ⊙'s limb not diſtinct when longitude obſerved. Bar. 2½ P.M. 29.8½. 12½. 29.8¾. 7½ A.M. 29.8¼. 8½. 29.9¼.
14	82	29.9½	29.8¾	82	29.8½	c. ſq, hr. c. c. c. r. c.	NW by W. V. V. NW. C. C. V. W by S. W by S. SW. SSW.			2		85. 0	82.39						1. 7	2.59	80.51			15.	16.	15.4	16.3	Not very ſteady.	28	Winds and weather very unſettled. P.M. a ſea bird like a plover: many fiſh. P.M. caught a ſhark. A.M. ſaw a ſail. Bar. 2 P.M. 29.8½. 4. 29.8¾. 12¾. 29.9. 8 A.M. 29.9½. 11½. 29.9.
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1775	Th.	Marine Barometer.				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E.	Latitude		Cor. Long.	Magnetical							ML.	
		R.	S.	Th.	D.			N	S	W	E	A.	TK.	D.☽ T.K.	☽				A.	O.		Variation		South Dip						
																						Az.	Amp.	Face		MD.	C.D.			
																								E.	W					
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°	°		5014	
Nov.												E	E	E	E				S	N	E	W	W							
15	81¾	29.9½	29.9	81¾	29.8½	c. ſq, r. ſq, hr. c. ſq. r. r. ſq, r. c. c.	V. V. W by N. W by S. W by S. SSE. SSW. SW.		19	2		86. 9	83.46						0.57	2.50	81.52			14.4	14.6	14.5	15.4	Very ſteady.	71	Moſtly variable wind and rain. P.M. a ſail; ſhewed French colours on firing a gun to ſpeak with her, but did not ſhorten ſail. Several birds and many fiſh. Bar. 2 P.M. 29.8½. 6. 29.9. 12. 29.9¼. 8 A.M. 29.9¼.
16	81	30.0	29.9¼	80½	29 9	c. ſq, hr. hr. hr. c. c. r. c.	SW. S. V. S by W. S by W. SW. SW.		9		6	87. 5	84.48	76	83.32	4	⊙	18	0.46	2.52	82.48			13.4	14.	13.6	14.5		57	Firſt part, moſtly ſqually with very heavy rain. Middle and latter, light airs and cloudy with ſome rain. ⊙'s limb not very diſtinct when *long.* obſerved. Bar. 2 P.M. 29.8¾. 4. 29.8¾. 10. 29.9½. 12. 29.9½. 8 A.M. 29.9½. 9. 30.0.
17	80	29.9¾	29.9	80	29.8¾	ſq, hr. c. ſq. c. hr. c. ſq, hr. ſq, hr. r. c.	S. V. S by W. SSE. SE. V. S by E. S by E. C.	21			18	88. 2	86. 3						0.32	3.27	83.57			14.4	15.2	14.7	15.6		59	Very unſettled weather with rain. Bar. 1 P.M. 29.9¼. 2. 29.9. 4. 29.9. 9½. 30.0. 1 A.M. 29.9¼. 9. 29.9¾. *At firſt the dipping-needle had no motion,* but with the face Eaſt was at $12^{\circ}\frac{4}{8}$; when moved a little, *it remained motionleſs:* when moved with the face to West, *the needle turned round, and ſtood any where.* Moved ſeveral times, it pointed with face E $14\frac{4}{8}$ W $15\frac{2}{8}$ Very ſteady.
18	83½	30.0	29.9¼	83½	29.9	ſr. c. c. r. r. c. c. ſq.	C. E. E by S. E by S. E. E by N. NE by E. NE by E. NE by N. N by E.	6			9	88.16	86.26						0. 3	4. 2	84.13			11.1	11.5	11.3	12.2	Pretty ſteady.	38	Moſtly light breezes. P.M. ſaw two dolphins, heard a tropic bird in night. A.M. caught two dolphins. *Dipping-needle pretty ſteady, and no appearance of defect as yeſterday.* Bar. 2 P.M. 29.8¾. 4. 29.8¾. 12½ A.M. 29.9. 8. 29.9½. 11. 29.9½.
19	83	29.9¾	29.9	83	29.8¾	c. ſq, r. ſq, th, L, hr. ſq. th, L, hr. r. c. c. r. c.	NNW. NW. V. V. C. V. C. V. N. N. N by E. NE by N.		18		19	88.57	87.26						0. 3	3.44	85. 7			10.6	11.2	11.	11.7		44	Variable winds, with rain. P.M. a ſwallow with ſhort wings and white breaſt. A.M. a ſmall land bird ſhaped like a water wag-tail, but in colour like a linnet, with a few yellowiſh feathers in the flank. A.M. a bird at diſtance like a gannet. Bar. 2 P.M. 29.8½. 4. 29.8½. 6. 29.8½. 1 A.M. 29.9½. 8. 29.9¾.
20	82½	30.0	29.9½	82¼	29.9	ſq, fr. ſq. ſq. ſq, L, hr. hr. hr. ſq. c. ſq, flying ſh.	NE by N. NE. NE by E. E by N. NE by E. ENE. NE. V. SE by E. SE. SSE. SSE. S by W.		30		13	90.27	89. 9						0.17	3. 0	86.40			11.4	12.2	11.7	12.6	Not very ſteady.	102	Freſh breezes, with ſome ſqualls and a great deal of rain. The land bird aboard ſtill. P.M. heard a bird, ſuppoſed to be a booby. A.M. paſſed a drift; a grey ſea bird ſhaped like a plover. A black ſea bird at a diſtance. Bar. 1 P.M. 29.8¾. 6. 29.8½. 1 A.M. 29.9. 7½. 29.9½. 9. 29.9½. 10. 29.9¾. 11. 29.9¾. 11¼. 29.9¾.
21	80¾	30.0¼	29.9¾	80½	29 9¼	r. r, L. to nw. h. h. r. h.	SW. V. V. C. V. V. C. C. V. W. V. N.	15			27	90.54	90. 3						0. 3	3.29	87.28			10.2	10.6	10.4	11 3	Very ſteady.	30	Variable, with rain and calms. The land bird aboard ſtill. A.M. ſaw a tropic bird. Paſſed a drift. Light airs. Bar. ½ P.M. 29.9½. 2. 29.9. 4. 29.9¼. 6. 29.9½. 7. 29.9½. 12½ A.M. 29.9¾. 8. 29.9¾. 10. 30.0.
22	81¾	30.0	29.9½	81¾	29.9	c. ſq. ſq. hr. c. r. r. r. c.	N. N by W. N by W. C. SE by S. V. V. NE by E. C.	14			55	91.17	91.21						N 0. 9	3.55	88.39			10.6	11.2	11.	11.7	Very ſteady, but ſhip not having ſteerage way.	30	Major part, light breezes, with ſome rain. The land bird aboard ſtill. P.M. ſaw a booby, ſome fiſh of the porpoiſe kind. A.M. a horſe fly, ſeveral riplings, and many fiſh. Water luminous at night. Bar. 4 P.M. 29.9¼. 5. 29.9¼. 12½ A.M. 29.9½. 7. 29.9¾. 8½. 30.0. 9. 30.0. 10½. 30.0.
23	82		29.9½	82		c. c. c. h. h.	C. E. V. V. E by N. NE by E. NE. NE by E. NE. NNE.	6			8	91. 8	91.20						0.45	4.37	88.31			7.6	8.4	8.1	9.	Very ſteady.	39	Firſt part, calm. Latter, light breeze from NE. with hazy weather. The land bird aboard ſtill. A.M. ſeveral tropic birds. Paſſed a bamboo adrift. Water luminous at night. Bar. 4 P.M. 29.9¼. 6. 29.9. 14½ A.M. 29.9½. 8. 29.9¾. 9. 30.0.
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		Marine Barometer.									Longitude from Greenwich							Latitude			Magnetical								
							D.L. A.O.		D.L. A.T.K.												Variation.		South Dip						
1775	Th.	R.	S.	Th.	D.	Weather and Winds.	N	S	W	E	A.	TK.	D.☽ T.K.	☽	S.	O.	E.D.	A.	O.	Cor. Long.	Az.	Amp.	Face E.	Face W.	MD.	C.D.		ML.	
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′ E	° ′ E	′ E	° ′ E			′	° ′ N	° ′ N	° ′ E	° ′ E	′ ° E	°	°	°	°		5484	
Nov. 24	82¼	30.0¼	29.9	82¼	29.9	f. NNE. NE by N. NE. f. NE. r. f. NE by N. f. ſq, r. c. NE.		10	32		90.29	90. 9						1.37	5.19	88.13		0.53*	7. 6.4	7.2 6.6	7.1 6.5	8. 7.4	By eſtimation. h. m. N.lat. Long. 11. 0PM 4.39 88.29 9. 0AM 5.21 88.26	73	Moderate breezes, and moſtly fair. The land bird aboard ſtill. A.M. ſaw a ſhip, the Dudley, Capt. BARRINGTON, from Madraſs to the Nicobars and Pegu; the Captain came on board. At 10 ſaw another ſhip. Bar. 6 P.M. 29.9. N.B. *Standing to SW.* from 10 A.M. to 1 P.M. *the dipping needle increaſed in dip, the diſtance not above* 10 *miles*
25	82	30.0¼	29.9¾	82	29.9¼	c. ſq. NE. V. ſq. c. r. V. E by N. ſq, r. V. ENE. ſq. c. ſq. NE by E. NE.		19	43		90.13	89.10						2.50	6.13	87. 7			8.2 6.2 5.6 5. 4.4	8.4 6.6 6.2 5.4 5.	8 3 6.4 6. 5.2 4.6	9.2 7.3 6.7 6.1 5.5	Very ſteady. 1. 0PM 5.17 88.18 9.15 5.23 88.10 12.30AM 5.45 88.11 9.10 6. 4 87.25 0.30 PM	81	Winds from NE. with frequent ſqualls and rain. The land bird aboard ſtill. 1 P.M. ſpoke the ſhip Floyer, from Madraſs to Malay Coaſt, Capt. RICH. Water luminous. Sea bird ſhaped like plover, grey with upper part of head black, and wings tipped with black. Same bird ſeems to have been about ſhip ſeveral days. Bar. 5 P.M. 29.9. 6. 29.9. 1 A.M. 29.9½. 8. 30.0. 9. 30.0¼. 11. 30.0¼.
26	82	30.0¼	29.9¾	81½	29.9¼	ſq, ſr. c. ſq, r. V. NE. V. ſq, r. ſq. c. NE. V. c. V. NE by E. c. ſq. NE. NE by E. V.		8	30		90 19	88.46						3.23	6.38	86.36			5 4	6.2	5 7	6.6	Very ſteady.	87	Freſh gales and ſqually throughout. The land bird aboard ſtill. Sea very luminous. P.M. a ſmall mew came on board. Bar. 2 P.M. 29.9¼. 10. 30.0. 1 A.M. 29.9½. 8. 30.0.
27	83½	30.0¼	29.9¾	83½	29.9½	ſq. ſq, r. NE. V. c. L. all round. V. E by N. ſq. h. L. all r^d^. E. E by N. h. E by N.		3	55		90.48	88.20	79	87. 1	5	⊙	43	3.28	6.40	86. 3			4.2	4.6	4.4	5.3	Very unſteady.	64	Winds moſt Eaſterly, with ſqualls and rain. Sent a boat on board a country ſnow with red colours; ſhe was bound from *Trankebar* to *Acheen*. Sight ⊙ not very good. Bar. 4 P.M. 29.9¼. 6. 29.9¼. 12½ A.M. 29.9¾. 8½. 30.0¼.
28	84½	29.9¼	29.9¼	84½	29.9	c. E by N. c. E by N. ENE. E by N. c. ſq. E by N. E. ſq. c. E by N.	4		20		90.50	88. 2	142	85.40	6	⊙	38	4.46	8. 2	85.40			3. 1.6	3.4 2.2	3.2 2.	4.1 2.7	1. 0AM 7.20 86. 2 Very ſteady. 0.30 PM 8. 5 85 40	78	Moderate breezes, and moſtly cloudy. Bar. 2 P.M. 29.9½. 4. 29.9. 6. 29.9. 12½ A.M. 29.9½. 8. 29.9¼. 11. 29.9½.
29	84½	30.0½	30.0	84½	29.9½	ſq, r. c. ſq. V. E. ſq, r. c. V. ENE. c. ENE. c. h. NE by E. ENE. NE by E.	15		13		90.39	87.38	152 139 160	85. 6 85.19 84.58	5 7 6	⊙ ⊙ ⊙	37 20 21	5.57	9.28	85.10			0.4 0.2 0.0 ND. 0.2 1.2 1.2	1. 0.6 0 4 0.2 ND. 1.6 1.4	0 6 0.4 0.2 0.0 ND. 1.4 1.3	1.5 1.3 1.1 0.7 ND. 0.5 0.4	Very ſteady, though ſhip pitching. 6.30 8.20 85.39 9. 0 8.25 85.38 11.10 8.30 85 37 Very ſteady. 1. 0AM 8.35 85 36 Pretty ſteady, 9. 0 9.14 85.15. 0.45PM. Not very ſteady.	72	Increaſing breeze from Eaſtward, with ſqually weather and rain. Bar. 3 P.M. 29.8¾. 4. 29.8¼. 6. 29.9. 1 A.M. 29.9. 9. 30.0. 10. 30.0.
																												5939	

1775	Th.	Marine Barometer				Weather and Winds.		D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E.D.	Latitude		Cor. Long.	Magnetical							ML.	
																						Variation		South Dip						
																								Face						
		R.	S.	Th	D.			N	S	W	E	A.	T.K.	D.☾ T.K.	☾				A.	O.		Az.	Amp.	E.	W.	MD.	C.D.			
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ E	° ′ E	′ E	° ′ E				° ′ S	° ′ S	° ′ E	° ′ E	° ′ E	°	°	°	°		5939	
Nov. 30	84½	30.2¼	30.0	85	29.9½	c. c. c. h. h.	NE by E. ENE. ENE. NE by E. NE by E.	11			5	90.15	87.19						7.13	10.55	84 55			4.	4.4	4.2	3.3	Very ſteady.	79	Moderate breezes, and moſtly hazy. Bar. 3 P.M. 29.9½. 5. 29.9¼. 8 A.M. 30.0.
Dec. 1	78		30.0	77½		h. h. h. c. ſq, r. ſq, r. ſq, hr.	NE by E. N. NE by N. NE by N. NNE. NNE. NE. NE. V.		9	6		90.36	87.34						7.24	[11. 1]	85.15			3.6	4.2	4.	3.1	Pretty ſteady.	61	Variable winds and weather, with much rain. A.M. a ſmall land bird, probably ſame we loſt ſome days ago. Bar. 1 P.M. 30.0. 3. 29.9¼. 4. 29.9¼. 6. 29.9½. 9¾. 30.0¼. 12½ A. M. 29.9¾. 7½. 30.0. 8. 30.0¼. 8½. 30.0½.
2	82½	30.0	29.9½	82	29.9¼	ſq, r. r. r. c. c. c.	V. V. NE. N by E. N by E. NE by N. NNE. NE by N.			5		91.20	88.13						7.17	10.50	85.58			2.2	2.6	2.4	1.5	Not ſteady.	52	Firſt part, ſqually with rain. Paſt 6 P.M. weather looked very black and threatening, but the barometer did not fall, and it came to nothing. Middle and latter, moderate A.M. the ſame land bird. Bar. 2 P.M. 29.9½. 2½. 29.8¾ 4. 29.9. 6. 29.9. 9¾. 30.0. 12½ A.M. 29.9¼. 6. 29.9. 7½. 29.9½. 8¾. 29.9¾. 11½. 29.9¾.
3	83½	30.0	29.9	83¼	29.9	c. c. c. h. h. f.	NE by N. NNE. NE by N. NE. NNE. N by E. N. NNW. N by W.		8		9	92. 4	89. 6	97	87.29	4	*A *F	43	7. 8	10.33	86.49			3.	3.6	3.3	2.4	Not very ſteady.	47	Decreaſing breeze, with pleaſant weather. A.M. the ſame land bird. A ſmall mew about ſhip. Bar. 2½ P.M. 29.9 4. 29.9. 7. 29.9¼. 12. 29.9¼. 7 A.M. 29.9¼. 7½. 29.9½.
4	83	30.0	29.9½	83¼	29.9	h. h. c. L. to nw. c. c.	NNW. NW. NW by W. V. V. WNW. WNW. V. SW. V. SSW.		4		3	92.16	89.21	116	87.25	6	*A	12	7.52	11.13	87. 2	1.32*	1.41*	5.4	5.6	5.5	4.6	Very ſteady.	52	Moſtly light airs. A.M. the ſame land bird. Bar. 2 P.M. 29.8¾. 6. 29.8¾. 10. 29.9¼. 12. 29.9¼. 7 A.M. 29.9.
5	84	30.0¼	29.9¾	83½	29.9¼	h. h. h. f. f.	SSW. SSW. S. S. V. SE by S. SE by S.	2			5	91.58	89. 8						8.39	12. 2	86.47	*1.12	*1.22	6.6	7.2	7.	6.1	Very ſteady.	50	Light breezes. A.M. the ſame land bird. P.M. a land bird, it flew like an owl. Bar. 3 P.M. 29.9. 4. 29.9¼. 7. 29.9½. 7 A.M. 29.9¾. 11½. 29.9¾.
6	83	30.0	30.0	83½	29.9	f. f. ſq, r. ſq, fr. ſq, hr. c. c.	SE. SE by E. SE by E. E. ENE. V. V. C. NE by E. E by N.		9	9		91.16	88.17	137	86. 0	6	*P	28	9.42	12.56	85.44			7.6	8.2	8.	7.1	Pretty ſteady.	75	Firſt part, moderate breezes. Middle and latter, ſqually. The ſame land bird on board. A ſand lark on board. Saw a ſnow ſtanding to N^d: it hoiſted Engliſh colours. Bar. 4 P.M. 29.9¼. 7½. 30.0. 7¾, *in ſquall*, 29.9¾. 10. 30.0. 12½ A.M. 29.9½. 12¾, *before hard rain*, 29.9. 29.9¾. 8½. 30.0. 9¼. 30.0.
7	80½	30.0¾	30.0¼	80½	29.9¾	c. c. c. c. f.	ENE. NE by E. NE by E. NE. NE by E. NE by E. NE by E.		12	17		89.26	86.10						11. 0	14. 2	83.45			8.6	9.2	9.	8.1	Pretty ſteady.	134	Freſh gales, with pleaſant weather. The ſame land bird on board. A mottled bird came on board. Bar. 2½ P.M. 29.9¼. 4. 29.9¼. 6. 29.9¼. 10. 30.0. 8 A.M. 30.0½. 11. 30.0¾.
8	81¼	31.0½	31.0	81¼	30.0½	h. c. f. f. f. h.	ENE. ENE. NE. NE. ENE. ENE.		12	3		87. 9	83.50	188 205	80.42 80.15	5 6	*A *A	36 43	11.27	14 17	81.23			9.2	9.6	9.4	8.5	Very ſteady.	135	Freſh breeze throughout. A ſmall land bird aboard. Bar. 2¾ P.M. 29.9½. 4. 30.0. 6. 30.0. 1 A.M. 30.0. 30.0½. 9. 31.0¼.
																													6624	

1775	Th.	Marine Barometer.				Weather and Winds.	D.L. A.O.		D.L. A. T.K.		Longitude from Greenwich				S.	O.	E D.	Latitude		Cor. Long.	Magnetical							M L.
																					Variation.		South Dip					
		R.	S.	Th.	D.		N	S	W	E	A.	TK.	D. ☽ T.K.	☽				A.	O.		Az.	Amp.	Face		MD.	C.D.		
																							E.	W.				
	°	In.Dec	In.Dec.	°	In.Dec.		′	′	′	′	° ′ E	° ′ E	′ E	° ′ E			′	° ′ N	° ′ N	° ′ E	° ′ E	′ ° E	°	°	°	°		6624
ec. 9	80		30.1	79½		h. ENE. h. ENE. h. E. h. E. ENE.		22	1		86.18	82.56						11. 9	13.37	80.42			5.6	6.2	5.	5.1	Very ſteady.	86
10						f. ENE		6 in 5½ hours.			86.14							10.47	[13. 9]									22
1776 Sept 10	At anchor in Madraſs Road, in the Grenville's cuddy (cabbin before the round-houſe) – – – – – –																		13. 7				5.6	6.6	6.2	5.3		
	Aſhore, in the fort of the Company's houſe near the church, – – – – – – – – – –																		13. 8				5.6	5.6	5 6	4.7		
28	Ditto, – – – – – – – – – – – – – –																						5.6	6.	5.7	5.		
Oct 3	Ditto, – – – – – – – – – – – – – –																						5.6	6.	5.7	5.		

	° ′
By the *latitude* obſerved at noon, the 9th of December, and the bearings of PULICAT *Flag ſtaff*, we were then from *Fort St. George*,	0.13E
Longitude of FORT ST. GEORGE, by *eclipſe* of *Jupiter's firſt ſatellite*,	80.29
Longitude of 9th noon, by *map*, – – –	80.42
Longitude by mean of 52 ☽ *obſervations*, – –	80.28
Difference, – – – – – –	.14

° ′
80.42 Longitude 9th noon by map.
82.56 Longitude by Time-keeper.

2.14 Error of Time-keeper ſince 18th Sept. in 83 days.

N.B. All the *obſervations* of the *dip* were taken with the *needle* ſtanding on the *table* in the Grenville's *round-houſe* towards the *ſtarbcard ſide* of the ſhip, except 2d, 3d, 6th, and 8th of October 1775; and 10th and 28th of September, and 3d of October 1776.

To the *Cape*

6732
8479
15,211

9th December.

Pleaſant gale. At 2½ P.M. had ſoundings, 28 fath. gravelly ſand; and at day-light ſaw the land bearing SW by W.

h	Weather.	Winds.	Courſe	K.F.	Soundings.
2	h.				30. no ground.
2½		E	WSW	1.5	24. gravelly ſand.
3			SbE½E	1.	20. 19. 18. 17. ditto.
4				2.	16½. 18. 17½. 20. ditto.
5			SSE	2.	25. 25½. 26. ditto.
6				2.	25½. 25. blue mud.
7				2.	25½. 26. ditto.
8				2.	26. 27. ditto.
9				2.3	37. 26. 25.
10		ENE		3.	25. 24½.
10½			S	2.2	23. 21. 20. 19. 18½. 18.
11			S by E	2.	18. 17½. 17½. 17.
12			SSE	4.	18. to 25.

At 6h. 30. Armegon Hill, W 13° N 10 or 12 miles off ſhore.
Southernmoſt part in Pulicat Ridge in *ſight*, SW.
The extreme in haze.
At 9h. 40. * A Hill or Grove, W 11° S.
° ′
R 28.30 Sandy Point of Armegon.
35.16 White Building.
43.38 Ext. in ſight to the Northward.
L 4.37 Higheſt Peak of Pulicat Ridge.
14.25 Kettle Bottom, ditto.
22.40 Ext. in ſight to the Southward.
At noon, * PULICAT Flag-ſtaff, S 52° W.
R 33. 6 Kettle Bottom, Pulicat Ridge.
46.30 Higheſt Peak, ditto.
50. 0 Sandy Point.
L 5. 0 Point to Southward of Pulicat.
19.30 Tuft near South ext. in ſight.

10th December.

h	Weather.	Winds.	Courſe.	K.F.	Soundings.
1	f.		S	4.5	27. 23.
2			S by W	4.5	20. 13.

At 5h. 30′. Anchored in Madraſs Road in 10½ fath.
* FORT ST. GEORGE Flag ſtaff, S 81°W.
about 4 miles off ſhore.
° ′
R 14.31 Obeliſk and Punch-houſe in one.
18.15 Armenian Church.
49.12 White-houſe on the Sea-beach.
L 18.47 Nabob's White Building.
25. 9 St. Thomas's Mount.
28.40 Triplicane Pagoda.
29. 6 Peak of 4 Sierras.

N. B. There being a very conſiderable difference in the poſition of Fort St. George according to the different obſervers, I have annexed a view of them.

° ′ ″
Lat. 13. 8. 0 N. 7th Oct. 1776, A.D. on board the *Swallow* ſloop of war { ⊙ merid. alt. / ⊙ double alt. } by a *Hadley* made by Bird.
13. 8. 0 { 1761, Rev. Mr. Hirſt, many obſ. made not long ago with an *excellent quadrant* (vide Ph. Tr. vol. LII. part I. p 396). N.B. It does not clearly appear whether theſe obſ. were made by Mr. Hirſt or by ſome *other perſon*.
13. 8. 0. { *Several obſervations* by Mr. William Nichelſon, maſter of the Elizabeth man of war, p. 48. Remarks and Obſervations made on a voyage to the Eaſt Indies.
13. 7. 0 Major James Rennell, ſurveyor-general of Bengal.
13. 4 54 Major William Stevens, chief engineer of Fort St George.
13. 4 47 Rev. Mr. William Smith, alt. of *, ſome to Northward, ſome to Southward.

By a *ſurvey* which has been made of the *country* from FORT ST. GEORGE to *Allumparva*, *Allumparva* is 17 ſtatute miles, or	14′.36″ W of Fort St. George.
From PONDICHERRY, by M. D'aprés, *Allumparva* is	13. E.
Fort St. George Eaſtward of Pondicherry,	27.36

Long. from Greenwich.

° ′ ″
80.28.45 Hon. Thomas Howe, eclipſe of Jupiter's firſt ſatellite, 5th July 1755.
80.15. 0 A.D. mean of 52 ☽ obſervations, compared together by the Time-keeper, in this Journal.
80.24. 0 A.D. ⊙ and ☽ 7th Oct. 1776, 3 ſights ext. diff. 10′.
80. 2.15 Rev. Mr. Hirſt, *Tranſit of Venus* 1761.
80.41. 0 Rev. Mr. Smith, by Dr. Maſkelyne's calculation, } Em. 27th May 1777.
81. 1.45 Ditto, by Mr. Smith's calculation, }

	° ′ ″	° ′ ″
PONDICHERRY, by M. Le Gentil 1769, is in	11.55.42 N.	79.52.30 E long. from Greenwich.
		27.36
Which places *Fort St. George* in		80.20. 6

In the explanation of *weather* dr. denotes *drizling rain*, and a comma (,) after any *weather* marked, implies that *all* the *weathers*, ſo ſeparated by *comma*, are connected: thus, ſq, r, th, L. imply *ſqually* with *rain*, *thunder* and *lightning*: ſq. r. th, L. imply *ſqually*, *rain*, *thunder* and *lightning*, to have all been in the period of ſix hours, but not at the ſame time.

In the explanation of the 5th column, *for* N denoting that the *obſervation* read N denoting that the *latitude* by *obſervation*.

	For	D. L. A. O.		D.L. A. T.K.		Long. from Gr.		Latitude		*Read*	D.L. A.O.		D.L. A T.K.		Long. from Gr.		Latitude	
		N	S	W	E	A.	TK.	A.	O.		N	S	W	E	A.	T.K.	A.	O.
		′	′	′	′	° E ′	° ′	° ′	° ′		′	′	′	′	° ′	° ′	° ′	° ′
May 2d,	—	—	9	—	—	—	—	—	—	—	9							
4th,	—	—	31	—	—	—	—	—	—	—	—	23						
8th,	—	—	39	—	—	—	—	—	—	—	—	19						
9th,	—	—	11	—	—	—	—	—	—	—	—	10						
10th, add 4′ to Lat. A till 15th incluſive, and	—	—	—	—	—	—	—	39.26	—	—	—	—	—	—	—	—	39.30	
14th,	—	—	20	—	—	—	—	—	—	—	—	26						
15th,	—	—	25	—	—	—	—	—	—	—	—	20						
18th, in column D. ☽ T.K. *for* W *read* E																		
22d,	—	—	18	—	—	—	—	—	—	—	—	16						
27th, ſubtract 10′ from Lat. A till 20th of June incluſive, and		—	—	—	—	—	—	15.32	—	—	—	—	—	—	—	—	15.22	
June 1ſt, ſubtract 10′ from Long. A to 25th of June incluſive, and		—	—	—	—	16.51	—	—	—	—	—	—	—	—	16.41			
5th,	—	—	—	—	20	—	—	—	—	—	—	—	—	19				
9th,	—	—	—	—	—	—	14. 1	—	—	—	—	—	—	—	—	14 15		
21ſt, ſubtract 11′ from Lat. A till 1ſt July incluſive, and		—	—	—	—	—	—	3.45	—	—	—	—	—	—	—	—	3.34	
26th,	—	21	—	—	—	10. 2	—	—	—	—	18	—	—	—	10.16			
27th,	—	—	—	—	—	10. 6	—	—	—	—	—	—	—	—	10.20			
28th,	—	—	—	—	—	11.10	—	—	—	—	—	—	—	—	11.24			
29th, add 13′ to Long. A till 2d Auguſt incluſive, and		—	—	—	—	12.18	—	—	—	—	—	—	—	—	12.31			
July 2d,	—	—	—	—	—	—	—	0.22 S	—	—	—	—	—	—	—	—	0.33 S	
3d,	—	—	—	—	—	—	—	1. 6		—	—	—	—	—	—	—	1.23	
4th, add 21′ to Lat. A. till 19 Auguſt incluſive, and	—	—	—	—	—	—	—	2.13		—	—	—	—	—	—	—	2.34	
24th, add 2′ to Long. T.K. till 28th July incluſive, and		—	—	—	—	—	28.12	—		—	—	—	—	—	—	28.14		
28th,	—	—	—	9	—	—	—	—		—	—	—	—	9				

ERRATA and ADDENDA in the GRENVILLE's JOURNAL.

For	D. L. A.O.		D. L. A. T.K.		Long. from Gr.		Latitude		*Read*	D. L. A.O.		D. L. A. T.K.		Long. from Gr.		Latitude	
		S	W	E	A.	T.K.	A.	O.		N	S	W	E	A.	T.K.	A.	O.
	′	′	′	′	° ′	° ′	° ′	° ′		′	′	′	′	° ′	° ′	° ′	° ′
July 29th, add 6′ to Long. T.K. till 10th Auguſt incluſive, and	–	–	3	–	—	27.56	—	31.33	—	–	–	–	3	—	28. 2	31. 3	
Aug. 3d, add 11′ to Long. A. to 9th Auguſt incluſive, and	–	–	–	–	13.56	—	—	—	—	–	–	–	–	14. 7			
10th, ſubtract 11′ from Long. A. till 18 Auguſt incluſive; ſubtract 6′ from Long. T.K. till 12th Auguſt incluſive, } and	–	–	–	–	—	2.25	—	—	—	–	–	–	–	—	2.19		
13th, ſubtract 4′ from Long. T.K. till 18th Auguſt incluſive, and	–	–	–	–	—	7.26	—	—	—	–	–	–	–	—	7.22		
14th, — — — —	–	16	–	–	—	—	—	—	—	16							
19th, — — — —	–	–	–	–	—	19. 9	—	—	—	–	–	–	–	—	19. 5		
Sept. 20th, ſubtract 10′ from Long. A. till 8th Dec. incluſive, and	–	–	–	–	21.26	—	—	—	—	–	–	–	–	21.16			
27th, ſubtract 20′ from Lat. A. till 16th Oct. incluſive, and	–	–	–	–	—	—	36.40	—	—	–	–	–	–	—	—	36.20	
Oct. 17th, ſubtract 59′ from Lat. A. till 22d incluſive. —	–	–	–	–	—	—	34.57	—	—	–	–	–	–	—	—	33.58	
23d, — — — —	–	–	–	–	—	—	29.55	—	—	–	–	–	–	—	—	29.17	
24th, ſubtract 41′ from Lat. A. till 10th of Nov. incluſive, and	–	–	–	–	—	—	29. 4	—	—	–	–	–	–	—	—	28.23	
Nov. 5th, — — — —	7	–	–	–	—	—	—	—	—	5							
9th, — — — —	–	14	–	–	—	—	—	—	—	–	4						
11th, ſubtract 31′ from Lat. A. till 17th incluſive, and —	–	–	–	–	—	—	2. 3	—	—	–	–	–	–	—	—	1.32	
18th, — — — —	–	–	–	–	—	—	0. 3	—	—	–	–	–	–	—	—	N 0.28	
19th, — — — —	–	–	–	–	—	—	0. 3	—	—	–	–	–	–	—	—	0.28	
20th, — — — —	–	–	–	–	—	—	0.17	—	—	–	–	–	–	—	—	0.14	
21ſt, — — — —	–	–	–	–	—	—	0. 3	—	—	–	–	–	–	—	—	0.28	
22d, add 31′ to Lat. A. till 9th Dec. incluſive, and —	–	–	–	–	—	—	N 0. 9	—	—	–	–	–	–	—	—	0.40	
Dec. 9th, — — — —	–	–	–	–	86.18	—	—	—	—	–	–	–	–	86. 8			
10th, — — — —	–	–	–	–	86.14	—	—	—	—	–	–	–	–	86. 2			

Regiſter of the Dip in His Majeſty's Sloop of War The Swallow, *Captain* JOHN ALEXANDER PANTON.

N. B. The ſhip having an iron tiller, and much iron about the after part, it was found, the obſervations taken in the cabbin were not conſiſtent or meriting confidence. From *Anjengo* they were all taken on the binnacle, which ſeemed to be the only fit place in the ſhip.

1776		Lat.	Long.	Magnetical						
				Variation		South Dip				
				Az.	Amp.	Face E.	Face W.	MD.	C.D.	
		° N ′	° E ′	° W ′	° W ′	°	°	°	°	
Oct. 14	Aſhore at *Trinquemalé* on Ceyloan.	8.32	81.30			3.6	3.6	3.6	4.5	
28	At anchor 10 fath. ſand and ſhells, *Anjengo* Road.	8.41	76.54	1.12*	1.13*	3.4	3.4	3.4	4 3	Very ſteady.
30		9.58	75. 4			1.6	1.6	1.6	2.5	Pretty ſteady.
31		9.54	74 24	1. 3*	0.53*	2.1	2.1	2.1	3.	Ditto.
Nov. 1	Off *Kalpeny*. } Lacadivé Iſl^{s}	9.57	73.35	1.25*		1.7	1.7	1.7	2.6	Not very ſteady.
2	Off *Scheulpar*.	9 59	72.30			1.5	1.5	1.5	2.4	Pretty ſteady.
3		9.38	71.18			2.7	2.7	2.7	3.6	Ditto.
4		9 49	70.26	1.30*		3.2	3.2	3.2	4.1	Ditto.
5		9.53	69.11	2 12*	1.54*	3.	3.	3.	3.7	Ditto.
6		9.55	67.35			3.	3.	3.	3 7	Not very ſteady.
7		10.43	65.30	4. 0* *4. 4	4. 3* *4.18	1.4	1.4	1.4	2.3	Ditto.
8		11.57	63.22	4.23*		ND. 0.4	ND. 0.4	ND. 0 4	0.3 ND.	Not ſteady, but taken when moſt at reſt.
9		12.45	60.34	5.15* *5.37		3.	3.	3.	2.1	Very unſteady.
10		12.59	57.21	6. 0* *7. 4	6. 6*	4.	4.	4.	3.1	Pretty ſteady.
11		13.29	55.12	7.30* *8.24	7.54*	5	5.	5.	4.1	Ditto.
12	Off *Socotra*.	13.16	52 55	7.57*	8.15*	5 4	5 4	5 4	4.5	Ditto.
13		13.28	50.58	9.20* *8 59	8.58* *9. 0	5 6	6.6	6 2	5 3	Very ſteady.
14	In ſight of *Coaſt* of *Arabia*.	13.51	49.37	9 35*	9.32*	7.2	8.6	8.	7.1	Quite ſteady.
15	Ditto.	13.37	48.33	9. 1* *8.46	9 30* *9.30	8.	9.	8.4	7.5	Ditto.

1776		Lat.	Long.	Magnetical						
				Variation		North Dip				
				Az.	Amp.	Face E.	Face W.	MD.	C.D.	
		° ′	° ′	° ′	° ′	°	°	°	°	
Nov. 16	In ſight of *Coaſt* of *Arabia*.	12.54	47. 4	9.31* *10.38	9.39* *10.35	6.2	7.2	6.6	5.7	Pretty ſteady.
17	*Cape Aden* in ſight.	12.41	45.25	*11.25	*11.30	6.2	7.2	6.6	5.7	Ditto.
18		12.38	[44. 5]	11. 3* *11.14	11. 5* *11.18	7.2	8.2	7.6	6.7	Ditto.
20	At anchor at *Mocha*.	13.22	44.10	11.35*	11.22*	8.6	9.6	9.2	8.3	Ditto.
21	Ditto.	13.22	44.10		11. 2*	8.4	9.4	9.	8.1	Not ſteady, much wind.
	Aſhore at the *Company's factory*.	13.20	44.11			9.2	9.6	9.4	8.5	
22	In ſight of *Gebel Zeker*.	14.24	43.35		11.11*	12.4	12.4	12.4	11.5	Pretty ſteady.
23	In ſight of *Gebel Tar*.	15.29	43.12	13.10* *13.14	12.50*	14.2	14.2	14.2	13 3	Very ſteady.
24	Ditto.	16. 2	42.49	14. 3* *12.57	13.53*	15.6	15.6	15.6	14.7	Ditto.
25		16.24	42.22	14. 2* *13.31	14.10*	16.6	16.6	16.6	15.7	Ditto.
26		17. 5	41 54	13.44*	13.50*	19.1	19.1	19.1	18.2	Ditto.
27		18.14	41. 0	13 54*	13.58*	20.6	21.	20.7	20.	Pretty ſteady.
28		19.36	40 30	13.12* *12.56	13.19* *12.42	24.2	24.6	24.4	23.5	Ditto.
29	Off *Judda*.	20.59	39.56	12.52*	12.59*	26.7	26.7	26.7	26.	Ditto.
30		21.43	39. 3		12.49*	29.6	29.6	29 6	28.7	Very unſteady, much wind and pitching.
Dec. 1	In ſight of *Coaſt* of *Abyſſinia*.	21 56	37.57				abou	30.		Very unſteady.
2		22.44	38.24			32.6	32.6	32.6	32.	Not very ſteady.
3		22.46	38.11			32.	32.	32.	31.2	Pretty ſteady.
4		22.54	37.44			32.4	32.4	32.4	31.6	Not very ſteady.
6	At anchor on *Coaſt* of *Arabia*.	24.16	38.29			34.6	34.6	34 6	34.	Pretty ſteady.
7	Off *Coaſt* of *Arabia*.	24.17	38.21	14.52*	15. 0*					

Regiſter of the Dip in His Majeſty's Sloop of War The Swallow, *Captain* JOHN ALEXANDER PANTON.

1776		Lat.	Long.	Magnetical						
				Variation		South Dip				
				Az.	Amp.	Face		MD.	C.D.	
						E.	W.			
		° ′	° ′	° E ′	° E ′	°	°	°	°	
Dec. 8	Aſhore on a *ſmall iſland* on *Coaſt* of *Arabia*.	24.17	38.30			35.	35.	35.	34.2	Much wind.
9		24.16½	38.30		14. 1*	35.	35.	35.	34.2	Pretty ſteady.
10					13 50*	35.	35.2	35.1	34.3	Very ſteady.
11	At anchor at *Bareedy*.	24.16¾	38.30		13.50*	35.	35.	35.	34.2	Not very ſteady, good deal of wind.
14						35.2	35.2	35.2	34.4	Very ſteady.
15		24.19	38.18			35.	35.	35.	34.2	Not ſteady, ſwell from Sd.
17		24.25	36.30			35.	36.	35.4	34.6	Much motion, with wind.
19		25. 4	36.10	*11.48	*11.41	36.2	36.2	36.2	35.4	Pretty ſteady.
20		25.45	36.26	11.30*	11.40*	38.	38.	38.	37.2	Not very ſteady.
21		26. 9	36.11			38.4	38.4	38.4	37.6	Pretty ſteady.
22		26.25	36. 1	12.15*	12. 5* *12.10	38.6	39.	38.7	38.1	Extremely ſteady.
23		26.55	35.38	12.58*	12.46*	39.7	40.7	40.3	39.5	Very ſteady.
25	In ſight of *Ras Mahomet*.	27.36					abt	42.		Very unſteady, much wind.
26		27.47			13.19*					
27		27.58			13.29*					
28		28. 4				42.	42.	42.	41.2	Pretty ſteady.
29	At anchor off *Tor*.	28.16				42.2	42.2	42.2	41.4	Ditto, a little ſwell.

1777			Lat.	Long.	Magnetical						
					Variation.		South Dip				
					Az.	Amp.	Face		MD.	C.D.	
							E.	W.			
		N. Lat. obſ.	° ′	° ′	° E ′	′ E °	°	°	°	°	
Jan. 2	At anchor at 5 fath. on *Coaſt* of *Africa*		29.12				43.6	44.	43.7	43.2	Freſh wind and good deal of motion.
3			29.35			12.50*	46.	46.	46.	45.3	Ditto.
4	Off *Suez*.		29.51	32.12			45.2	45.6	45.4	44.7	Perfectly ſteady.
5	At anchor off *Suez*.	29.58.12	29.58	32.15			45.6	45.6	45.6	45.1	
6	Ditto.	29.58. 1	29.58				45.2	45.2	45.2	44.5	Very ſteady.
7	Ditto.						45.2	45.2	45.2	44.5	
	Changed the poles, *unmarked end* dips,			–	–	–	43.6	43.3	43.4	44.	A little wind.
	Rechanged the poles, *marked end* dips,			–	–	–	44 4	44.4	44.4	44.	Ditto.
8	At anchor off *Suez*.	29.58.25	29.58				44.5	44.5	44.5	44.	Perfectly ſteady.
9	Ditto.						45 5	45.7	45.6	45.1	Ditto.
10	Ditto.		29.58								
	Suez	29.58.10	30. 2	32.16							

Aſtronomical Obſervations in The Swallow.

	Long. from Greenwich.					
	D. ☾ T.K.	☾	O.	S.	E. D.	
	° ′ W	° ′ ″				
Nov. 1	.22	73.31.30	⊙	6	33	*Kalpeny* bearing N.
4		70.26.	⊙	5	15	
6	E .30	67. 5.	⊙	5	13	
7	W .22	65.52.	⊙	4	6	
15	E 1.22	47.11.	⊙	6	20	
16	.50	46.14.	⊙	5	28	

	Long. from Greenwich.					
	D. ☽ T.K.	☾	O.	S.	E. D.	
	° E	° ′ ″				
Nov, 19		44. 8.18	⊙	5	14	At anchor in *Mocha Road*.
20		44.16.	⊙	5	8	20th. Obſerved an immerſion of 1ſt ſat. of Jupiter with my glaſs, a good deal of wind and ſhip not very ſtill,
21		44. 6.	*A	3	15	*Per* watch — — 11. 0.30
24	.21	42.28.	*A	5	13	Watch ſlower than apparent time 1.52.19
29	1. 9	38.47.	*A	5	33	12.52.49
Dec. 2	.35	37.49.	⊙	7	20	Eclipſe *per* naut. alm. — 9.56.48
3	.38	37.34.	⊙	5	15	2.56. 1 = 44.0.15 (° ′ ″)

	Long. from Greenwich.					
	D. ☾ T.K.	☾	O.	S.	E. D.	
	° E ′	° ′ ″				
Dec. 6	.29	37 50.	⊙	3	3	
1777 Jan. 4		32.12.	⊙	3	10	Off *Suez*.
		32.11.	⊙	5	10	
5		32.42.	⊙	5	8	At anchor in *Suez Road*.
6		31.47.	⊙	5	14	
		32.21.	⊙	5	24	